DOCUMENT RESUME

ED 168 749 RC 011 127

AUTHOR Truesdell, Wayne P.
TITLE A Study of Iowa's Public Elementary and Secondary Enrollment Trends 1977-78 through 1981-82.
INSTITUTION Iowa Univ., Iowa City. Coll. of Education.
SPONS AGENCY Iowa State Legislature, Des Moines. House Budget Committee.
PUB DATE 78
NOTE 68p.; Small type may be marginally legible

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Birth Rate; Declining Enrollment; *Demography; *Elementary Secondary Education; *Enrollment Influences; *Enrollment Projections; *Enrollment Trends; Migration; Population Trends; Private Schools; *Public Schools; Rural Areas; Rural to Urban Migration; Urban to Suburban Migration
IDENTIFIERS *Iowa

ABSTRACT

At a 20/1 pupil/teacher and pupil/room ratio, by 1984 Iowa public schools will need 8,100 fewer rooms and teachers than was necessary during the peak enrollment year of 1969. The most precipitous drop in enrollment could come in the six year period from 1977 to 1982 when 120,363 more students will graduate from the public school system than will enter it. The drop in Iowa enrollment can be partly explained by a significant out-migration since 1930, an out-migration which drains disproportionate numbers of the 20-29 age group, the future parents of school children. Population has also shifted within the state; both the largest cities and rural areas are losing population to the suburban fringe around major industrial centers. This study traces Iowa enrollments historically, explores the cause for cycles of change, projects enrollments to 1982 and 1987, and examines the impact of enrollment trends upon Iowa public education. Because enrollment projections can be no more reliable than the causative data which determine school enrollment trends, the document also traces such factors as (1) population growth, (2)out-migration from the state and between counties, (3) relative proportion of significant age groups in the population, (4) trends in fertility rates and births, (5) enrollment trends and projections, (6) geographical trends in enrollment and (7) enrollment trends by size of school. Tabular data includes 1969 and 1977-78 enrollments and projected enrollments (1982-83 and 1987-88) for each Iowa public school. (Author/DS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED168749

A Study of Iowa's Public Elementary and Secondary Enrollment Trends 1977-78 through 1981-82

by Wayne P. Truesdell

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

RC 011127

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
George A. Chambers
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

RC011127

A Study of Iowa's Public Elementary and Secondary Enrollment Trends 1977-78 through 1981-82

by Wayne P. Truesdell

Professor Emeritus, University of Northern Iowa
© Copyright 1978, The University of Iowa College of Education

For an expanded discussion of material presented here the reader should consult Professor Truesdell's *A Study of School Population Trends and Projections with Implications for Financing Iowa Schools* (1978).

TABLE OF CONTENTS

Acknowledgments iii

Overview 1
- A Synopsis 1
- Objectives and Procedures 2
- Summary of Findings 2

Population Trends and Projections, Iowa and the Nation 7
- The Excess of Births over Deaths 7
- Population Growth in Urban and Rural Iowa Counties 8
- Relation of Migration to Industrialization 9
- Effect of Migration on School Population 10
- Tabular and Statistical Material 12

Analysis of Iowa Population by Age Groups with Reference to Effect upon School Population 20
- Projections of Births to 2020 21
- Tabular and Statistical Material 23

Trends in Fertility Rates and Births with Projections 25
- Fertility Rates 25
- Iowa Fertility and Births Compared with United States Data 26
- Births and School Enrollments 27
- Tabular and Statistical Material 28

Public School Enrollments and Projections 31
- Projections of Total Iowa Enrollments 31
- Observations on Public School Enrollment Trends 32
- Full Circle in 40 Years: An Analysis of Enrollment Cycles 33
- Projection of Enrollment for Individual Schools 33
- Geographical Trends in Enrollment 35
- Enrollment Trends in Iowa Cities 36
- Effect of Industrialization on School Enrollments 36
- Enrollment Trends by Size of School 37
- Enrollment Trends by Area Education Agency 38
- Significance of Private School Enrollments 38
- Tabular and Statistical Material 40

ACKNOWLEDGMENTS

This study is the second of five made possible by the Interim Study Committee of the House Budget Committee of the Iowa General Assembly. Committee members were: Representative N. Jesse, chairman; W. Horn, F. Koogler, J. Patchett, D. Stromer, and R. Welden.

The objectives underlying each of the five studies were to provide pertinent information and to increase knowledge regarding selected problems facing education in Iowa.

The five studies of education in Iowa were conducted by faculty members at The University of Iowa, Iowa State University, and the University of Northern Iowa. The five studies were coordinated by Professor George A. Chambers, Chairman of the Division of Educational Administration, The University of Iowa. The titles of the five studies and the faculty researchers are:

"A Study of State of Iowa Appropriations with an Emphasis upon Expenditures for Education," George A. Chambers, Leo A. Gerst, and Marvin E. Jackson, The University of Iowa.

"A Study of Iowa's Public Elementary and Secondary Enrollment Trends, 1977-78 through 1981-82," Professor Emeritus Wayne P. Truesdell, University of Northern Iowa.

"Enrollment in Postsecondary Education in Iowa: Prospects and Potential Problems for the Period 1977 through 1986," Duane D. Anderson, Robert E. Engel, and Robert S. Ellinger, The University of Iowa.

"A Cost Projection for Special Education Funding in the State of Iowa, 1975-76 through 1985-86," Clifford E. Howe, The University of Iowa.

"A Study of Current and Potential Cooperation in Vocational-Technical Education between Area Schools and Public Schools in Iowa," Harold E. Dilts, Iowa State University.

The authors express their appreciation to the committee and to Ms. Linda King, administrative assistant to the committee, for help and direction in conducting the studies.

page ii blank.

CHAPTER 1—OVERVIEW

A Synopsis

Iowa public schools could enroll 25% fewer students in 1984 than in 1969, when enrollments peaked at 659,888 students. At a 20/1 pupil/teacher and pupil/room ratio there would be need for 8,100 fewer rooms and teachers than in 1969. The most precipitous drop in enrollment could come in the six years from 1977 to 1982, when 120,363 more students will graduate from the public school system than will enter it.

Enrollments should level off in the 1983-86 period as the large number of births in the 1946-64 period complete schools, and the pupils born since 1973 enter kindergarten. If a 2.1 fertility rate prevails, enrollments will stabilize around 498,000 students toward 1986. However, from 1972 to 1976 the fertility rate was 1.8 births per woman in a lifetime. Should this rate continue, the leveling-off period could extend to 1988, reaching a low of 495,000 students.

Historically, Iowa's decline in number of births and in school enrollment has exceeded the national average. Nationally, peak enrollment was reached in 1971, with 46 million students. Projections with a 1.8 fertility rate show enrollments leveling off at 38.6 million in 1985. This is a national drop of 16.1%, compared to Iowa's projected drop of 25% using the same fertility rate.

Iowa approaches the nadir in a second cycle of enrollment trends. It is difficult to believe that Iowa reached its first peak in enrollment in 1901 (566,223 students), that enrollments declined steadily until 1948 (456,624 students), and that the 1901 figure was not surpassed until 1959. These figures are difficult to believe because in 1901 about 15% of the 14-17 year olds were in school, compared to over 90% since 1930.

The greater drop in Iowa enrollments can be partly explained by a significant out-migration since 1930—an out-migration which drains disproportionate numbers of the 20-29 age group, the future parents of schoolchildren. From 1930 to 1970, two-thirds of the possible growth in population left Iowa. From 1960-70, 21.8% of those in the 20-29 year age group left Iowa. In comparison, 3.6% of those under 20 years of age and 3.1% of the over-30-year-old group out-migrated during the same decade.

Private enrollments dropped precipitiously from 1965 to 1971. In 1965, the peak year, private enrollments were 104,175 students, 14.3% of total school enrollments. In 1977, private enrollments had dropped to 57,040 or 8.9% of total public and private enrollment. From 1965 to 1977, private enrollments dropped, but public school enrollments continued to grow until 1969, partly attributable to transfers from private schools. Public school enrollments have dropped 11.02% from the 1969 peak to September 1977.

Objectives and Procedures

It is the purpose of this study to:

1. Trace Iowa enrollments historically
2. Seek the cause for cycles of change
3. Project enrollments to 1982 and 1987
4. Study the impact of enrollment trends upon Iowa public education.

Because enrollment projections can be no more reliable than the causative data which determine school enrollment trends, this study has attempted to trace such factors as:

1. Population growth (Chapter 2)
2. Population migration from the state and between counties (Chapter 2)
3. Relative proportion of significant age groups in the population (Chapter 3)
4. Fertility rates and births (Chapter 4)
5. Enrollment trends and projection (Chapter 5)
6. Geographical trends in enrollment (Chapter 5)
7. Enrollment trends by size of school (Chapter 5)

Summary of Findings

Chapter 2–Population Trends

Since 1900, Iowa population has increased at about one-sixth the national average. From 1900 to 1970, Iowa gained 26.2% in population while the nation increased its numbers 167.4%. A factor in Iowa's slower population growth has been significant out-migration in every decade after 1900. With no out-migration since 1900, Iowa could have had 3.5 million citizens in 1970 rather than 2.8 million, the head count in 1970. Since 1930, out-migration has equalled two-thirds of potential growth—the difference between births and deaths. From 1950 to 1970, Iowa gained by 8.0% but lost another 15.6% of its 1950 total by out-migration. The annual rate of out-migration was .61% from 1960 to 1970, but slowed to .22% during 1970-76. Actually, the drop in out-migration of 11,721 per year during 1970-76 is virtually attributable to the 11,329 annual drop in number of births during 1970-76. The largest growth and out-migration occurred during the "baby boom" years from 1946 to 1964.

Besides fleeing, population has shifted significantly within Iowa, a shift with two dimensions. Iowa's largest cities and rural areas are losing population to the suburban fringe around major industrial centers. The rural exodus has been most noticeable in southern and western Iowa. In some southern Iowa counties, the 1970 population was only 42% to 58% of the population in 1900.

Part of the out-migration from and decline in population and enrollment in rural counties is attributable to enlarged size of farms, a trend evident since 1950. From 1940 to 1976, the number of Iowa farms dropped by 37.6% and the farm population dropped by 58.2%. Correspondingly, growth of towns in the fringe extending 25 miles around industrial centers has been a phenomenon since 1950. Enrollments have dropped in the inner cities, in most of them by more than the state drop of 11.0% from 1969-77. Greatest increases in enrollment are in those districts touching the inner cities. As they fan out from the cities, school-enrollment increases decline. Beyond the 25-mile radius, most districts have declined more in enrollment than the 11% state drop. Geographically, the largest declines in enrollment are in the strictly rural areas in southern and western Iowa.

The 18 Iowa counties classed here as urban contained twice as many people in 1970 as in 1900 (a 110% increase), while the 81 nonurban counties had dropped by 14.7% in the same 70 years. These 18 urban counties encompassed 56.2% of Iowa's population in 1970 compared to 25.6% in 1900.

Projections to 1990 suggest that Iowa could show a 9.4% growth from 1970 to 1990, compared to 7.7% from 1950 to 1970 and 6.1% from 1970 to 1980. Growth among 18 urban counties should exceed growth among rural areas by 39.2% to 1990; but the decline in rural county populations may stop, and small increases could be the trend in the next 20 years. Only the 21 northwestern rural counties are expected to drop in numbers to 1990, by 6.8%. The 18 south rural Iowa counties, which dropped 42.0% in numbers from 1900 to 1970 are expected to gain 2.8% in the 20 years to 1990.

Chapter 3–Distribution of Iowa Populations by Age Groups

Two age groups are of interest to those who plan school facilities and programs, and who staff the schools: the school-age group (under 20), and those who will bear children (women ages 15-44). For reasons explained later, the Iowa population is broken down in this study into three additional age groups: the most mobile group in the population (ages 20-29), the less mobile 30-44 year olds, and the work force (ages 20-64).

From 1890 to 2020, distribution of Iowa population by age groups could progress through three cycles. The relationship between size of the 0-19 year old group and the 20-44 year old group is axial in this study.

The 0-19 year olds declined steadily as a percentage of total population from 1890 to 1940; the "baby boom" of 1946-64 saw a significant increase in this age group from 1945 to 1970. The post-1975 decline in births accounts for a drop in the number and percentage of the population in this age group, which could extend to 2020.

The 20-44 age group tends to show trends opposite from those of 0-19 year olds. Since 20-44 year olds produce 84% of the children, it would be

logical that the percentage in these age groups would show similar trends; in fact, more births occurred when the number of women of childbearing age has been smaller. The number of births tends to be inversely correlated with the number in the 20-64 age group, the work force. A study of this phenomenon, which the writer terms "Economic Determinant of Birth," is available through the research cited on the cover page of this monograph.

Out-migration is significant to the number of Iowa births, and within Iowa population shift affects distribution of potential parents. Out-migration drains a disproportionate share of 20-29 year olds from Iowa and from rural to urban counties within the state. From 1960 to 1970, out-migration drained off 21.8% of the 20-29 year olds, but only 2.1% of those under 15, and 3.0% of those over 40.

The 21.8% state loss of 20-29 year olds from 1960 to 1970 prevented most Iowa counties from gaining in number in this age group. All 73 rural counties lost more than the 21.8% figure in the 1960-70 decade. Of the eight counties classed as suburban, half had losses greater than the average 21.8%; and eight of the 18 urban counties lost more 20-29 year olds than the state average. Only four Iowa counties, one suburban and three urban, had an increase.

Chapter 4–Fertility Rates and Birth

The effect of declining birth rates upon school enrollment is obvious. In Iowa for the school years starting September of 1978-82, the senior class will be populated by 98,618 more births than the kindergarten classes who will enter public school in the fall. The result is an estimated 80,000 drop in public school enrollment in those five years.

The large number of Iowa women of childbearing age from 1965 to 1985 should mean more births, even if low fertility rates continue. There were 44,811 births in 1977 compared to the low of 38,898 in 1973, but births in the first quarter of 1978 were 2.3% below 1977. Thus, projections suggest a peak of 54,000 births a year with a 2.1 fertility rate and just under 50,000 with the recent rate of 1.8 births per woman per lifetime.

Geographically, Iowa's birth pattern and age-distribution pattern follow the migration pattern enumerated in Chapter 2. The 71 rural counties averaged 49.3 births in the low year of 1973 for each 100 births in Iowa's high year of 1951. Geographically, southern and western Iowa counties showed the greatest decline in births. Urban counties had a smaller drop in number of births than rural counties, partly because of in-migration and partly because a larger percentage of the population remained in the childbearing age. The 18 urban counties averaged 68.4 births in 1973 for each 100 in 1951.

The upturn in number of births since 1973 reverses the 1950-70

trends. Births among 71 rural counties increased 9.4% from 1973 to 1978, while the increase among 18 urban counties averaged 4.1%.

Chapter 5–School Enrollments with Projections to 1982 and 1987

This research groups Iowa schools into nine categories according to number of students. Total state enrollment is always included in any table or figure showing enrollment trends. Iowa attained its first enrollment peak in 1901 (566,223 students), even though only 15% of the 14-17 age bracket was in school compared to the 90% since 1930. Enrollments declined steadily to a low of 456,624 in 1948. The "baby boom" accounted for steady increase in enrollments until 1967, and transfers of children from public to private schools were greater than birth declines until 1970. The peak enrollment was 659,888 public school students since 1969.

A statewide decline in enrollments started in 1970. By 1982, enrollments should offer a decline of 80,000, or 13.6%, to an estimated 507,550 students. The leveling-off point could appear between 1984 and 1988, at 494,000 to 498,000 students, 25% below the 1969 peak. The drop could be 165,000 or 6,635 rooms and teachers.

That there will be a public school enrollment drop can be interpreted from birth figures. In September 1977, grades 8-12 were populated by an average of 60,874 births a year; grades 1-7 by an average of 48,363 births a year; kindergarten by an average of 42,123 births a year. As grades 8-12 graduate, they will be followed by kindergarten classes from an average of 41,262 births a year.

Enrollment declines form a bowl shape, with smallest schools and largest schools experiencing greatest declines. Schools under 300 students dropped 24.0%; those between 300 and 500 lost 18.1%; the seven schools exceeding 10,000 students (omitting Dubuque) dropped 15.9%.

In line with previous analyses of population trends, migration, and births, the great enrollment declines appear in rural districts of southern and western Iowa. The largest increase in enrollment seems to be in districts touching the central city.

Statewide, 67 of Iowa's 449 districts saw enrollment increases from 1969 to 1977. Six lie outside a 25-mile radius from one of Iowa's 20 largest cities, and four of these six are in Iowa's growing lake recreation areas. Of 67 schools whose 1977 enrollment exceeded 1969, 18 border Des Moines, 11 border Dubuque-Clinton-Davenport-Muscatine, and 8 lie within a 25-mile radius of Cedar Rapids.

The creation of the Area Education Agencies in 1975 added another dimension to the enrollment pattern. The 15 AEAs differ widely in area, enrollment, and in composition of enrollment. AEAs 5 (Fort Dodge) and 11 (Des Moines) have the largest area; AEA 11 has the largest enrollment,

19.5% of Iowa's public school total; and AEA 4 (Northwest Iowa) enrolled the fewest students, 2.2% of the total.

Enrollment declines have been greatest in northwest and southern rural AEAs. Iowa's drop in enrollment from 1969 to 1977 was 11.0%. AEA 5 (Fort Dodge) lost 20.5%, AEA 4 (Northwest Iowa) 18.4%, AEA 2 (Mason City) 17.8%, AEA 9 (Davenport) 2.7%, AEA 1 (Northeast Iowa) 4.2%, AEA 10 (Cedar Rapids) 8.1%, and AEA 11 (Des Moines) 8.2%. Trends in enrollment follow the agricultural/industrial pattern previously described. Largest declines are expected in 1982 in AEAs 5, 4, and 2—19.8%, 17.3%, and 17.0% respectively.

CHAPTER 2—POPULATION TRENDS AND PROJECTIONS, IOWA AND THE NATION

Since 1900, Iowa population has increased at one-sixth the national rate. From 1900 to 1970, Iowa population growth was 26.2% compared to 167.4% national growth. From 1900 to 1910, Iowa lost 0.3%, while the nation grew by 21.0%. Up to 1930, Iowa had grown by 10.7% compared to 61.6% nationally. From 1950 to 1970, Iowa gained 7.7% compared to the nation's 34.9%. Two factors in this smaller rate of growth are out-migration from Iowa and a birthrate less than the national average, as will be explained later.

Table 2.1 shows the population of Iowa and the United States from 1900 to 1970 and population projections by decades to 2020. These projections by the U.S. Census Bureau and the Iowa State Demographic Center use both 1.8 and 2.1 births per woman per lifetime as fertility rates. Figure 2.1 graphs this growth rate.

With a 2.1 fertility rate, Iowa could gain 4.5% by 1980 compared to a 9.3% national gain. From 1970 to 1990, Iowa would gain 15.2% and the nation 20.6%. By 2020, Iowa could have 36.8% more people than in 1970 compared to 44.7% nationally.

The Excess of Births Over Deaths—Growth and Out-Migration

Iowa had a significant out-migration in every decade since 1930. From 1930 to 1970, out-migration was never less than 60% of the excess of births over deaths. In short, Iowa has tended to lose about two-thirds of its growth potential by out-migration. Table 2.2 reveals Iowa population data by decades since 1930, showing what fraction contributed to Iowa growth and what part left the state.

Iowa's population could have increased by 892,000 people from 1930 to 1970, if net migration had been zero. However, net migration was 680,000 during those 40 years, and actual growth was 355,000 persons (14.3%). Thus, 65.7% of the excess of births over deaths left Iowa from 1930 to 1970.

Iowa gained 44,000 people from 1970 to 1976 but lost 38,000 by out-migration. From 1950 to 1970, Iowa could have gained 618,000 (34.6%), but 409,000 persons left Iowa, making total growth of 209,000 (8.0%). From 1950 to 1970, 66.2% of the potential growth left the state. Iowa could have had 3,510,000 citizens in 1970 rather than the 2,830,000 people counted in that year.

A special study by the U.S. Bureau of the Census for the 1970-76

period shows an out-migration of 1.3% for the six years, compared to 6.1% for the 1960-70 decade. Converted to an annual rate, the out-migration from 1960 to 1970 would average .61% annually. From 1970 to 1976, the out-migration averaged .22% annually, about one-third the rate during preceding years. The smaller birthrate since 1965 reduced the excess of births over deaths, which may be the primary factor in the smaller out-migration rate from 1970 to 1976. The drop in out-migration of 11,712 a year from 1960-70 to 1970-76 is almost identical to the 11,329 drop in births per year for the same two periods. The rate of population growth was almost identical for the two periods, .27% and .25% a year.

From 1960 to 1970, only seven Iowa counties had a net in-migration, but 29 of Iowa's 99 counties showed an in-migration from 1970 to 1976.

Population Growth in Urban and Rural Iowa Counties

Population data suggest a significant migration of Iowans from rural to urban areas. This study divides Iowa into six areas for the analysis of trends in population, migration, age groupings, births, and school enrollments. The maps outline these areas. The 18 counties classified here as urban are designated by a "U." Figure 2.2 shows net migration in numbers by Iowa counties from 1960 to 1976 and then shows the percent of migration from 1960 to 1970 and from 1970 to 1976.

Table 2.3 compiles data for the six areas and for all rural counties, adding the 18 urban counties as an additional line. The projection to 1990 is included. The 18 southern rural counties have been declining in population since 1900. From 1900 to 1970, the drop was 42%; from 1950 to 1970, it was 20.6%. The 1990 projection shows an increase of 2.8% in the population in these southern Iowa counties.

The 21 northwestern rural Iowa counties gained 17.1% in population from 1900 to 1970. However, this area is projected to lose population from 1970 to 1990.

It would appear that the central and eastern Iowa counties have been affected by the proximity of industry. A report by the Iowa Office of Planning and Programming (*Des Moines Register*, August 31, 1976) points to the growth of many small Iowa towns. However, the towns mentioned—Altoona, Carlisle, Adel, Waukee, and Slater—are all suburban to Des Moines. It seems that major growth in small towns has occurred close to industrial centers. Central Iowa rural counties gained 1.4% in population from 1900 to 1970, and are projected to gain 19.3% from 1970 to 1990. The 1980 census will likely confirm this projected trend.

Some counties previously classified as rural are acquiring a suburban personality. Warren County, the outstanding example of a suburban county growing from an influx of families, touches the Des Moines Community School District. This county lost in population from 1900 to 1930 (-13%),

gained only 0.3% from 1930 to 1950, but expanded by 54.5% from 1950 to 1970. Its projected 1990 population is 76.3% above the 1970 figure.

Dallas, Madison, and Marion counties have thrived as suburbs of Des Moines. Louisa County absorbs Muscatine workers. Jackson County is between Dubuque and Clinton.

The 18 urban counties have absorbed much of the population leaving rural Iowa since 1930. Their population more than doubled from 1900 to 1970. Urban counties had 32.6% of Iowa's population in 1900, 54.6% in 1970, and are projected to gain markedly by the end of this century. The projections allot these 18 counties 55.9% of Iowa's population by 1990. Figure 2.3 shows Iowa population by counties for census years 1950 and 1970 and projects the population to 1990.

Generally, the 18 urban counties have absorbed considerable numbers of the 19-29 age group who migrate to the cities to find jobs not available in rural areas. A later study of migration and school enrollment suggests that unmarried or childless 20-29 year olds may go to the inner cities, but 20-29 year olds with children and the over-30 group with children tend to seek the periphery around the cities. (See Figure 2.3.)

Among the urban counties, Johnson and Linn have experienced more than 50% gains from 1950 to 1970, while Dubuque, Story, Scott, and Polk all showed more than 25% gains. The losers were Wapello (11.3%) and Woodbury (0.8%). The future suggests greatest gains for Story, Scott, Johnson, and Muscatine. Cerro Gordo, Des Moines, Lee, and Wapello are predicted to drop in population by 1990.

Industrial growth would appear to be greatest in east central Iowa. Scott, Muscatine, Clinton, Dubuque, Linn, and Black Hawk counties have attracted the largest population from rural Iowa. Wapello, Cerro Gordo, and Webster counties appear to have stalled in industrial growth. Dependence upon farm-related industries, such as meat packing in Ottumwa, Mason City, and Fort Dodge, could account for a lack of industrial growth in the last few years. Lee and Des Moines counties in southeastern Iowa have failed to make the population gains registered by northern counties. Woodbury and Pottawattamie counties in western Iowa seem to have slowed in growth.

This population picture is similar to the enrollment trends and projections, as will be demonstrated later in this study. Enrollment trends reinforce these population trends.

Relation of Migration to Industrialization—Metropolitan Growth

Throughout this study, demographic effects of industrialization are explored, especially growth around the 20 urban centers. The central city is used as the focal point and one set of counties around the urban county is included. Some grouping of central cities into a single area results where

adjacent counties have cities of over 10,000 population.

Table 2.4 shows this data by geographical area. Table 2.4 classes counties as suburban if migration among any of the three enrollment classifications varied significantly from state averages. (0-14 year olds—2.1%; 20-29 year olds—21.8%; 30-44 year olds—5.0%.) Reference can be made to the map in Figure 2.4.

In summary:

34 of the 73 rural counties lost over 50% of their 20-29 year olds during the 1960-70 decade.

60 of Iowa's rural counties saw over 40% of the 20-29 year olds leave the county in the 1960-70 decade.

0 of the 73 rural counties saw an influx of 20-29 year olds from 1960 to 1970.

0 of the 73 rural counties had a loss of 20-29 year olds less than the state average (21.8%) in the 1960-70 decade.

4 of the 8 suburban counties lost less than the state average.

1 of the 9 suburban counties lost over half of this age group.

1 of the 8 suburban counties had an increase in 20-29 year olds during the period.

6 of the 18 urban counties had an increase in the 20-29 year olds.

10 of the urban counties lost less than the state average.

Of the suburban counties, Jefferson and Henry are unusual because their colleges attract 20-29 year olds. Among the urban counties, Johnson and Story also have universities and a large influx of 20-29 year olds.

The Des Moines-Ames-Newton-Marshalltown area had the greatest in-migration or least loss of all the areas. It lost 8.5% of 20-29 year olds, but it showed little gain in the under-15 or the 30-44 age groups.

The Cedar Rapids and Davenport-Clinton-Muscatine areas were next in attraction of people. The Mason City area saw the greatest loss of 20-29 year olds (-46.9%), but not the greatest loss of those under 15 (-4.1%) or 30-44 year olds (-5.5%). The Fort Dodge area was second in loss of the 20-29 year olds (-43.8%), followed by the Ottumwa area (-40.3%).

Effect of Migration on School Population

Migration between rural and urban centers is significant to future distribution of school-age population.

To ascertain the possible effect of migration upon school population, three segments of Iowa's population have been segregated for analysis. Figure 2.4 uses:

1. Ages 0-14, the potential school-age population
2. Ages 20-29, the most migrant
3. Ages 30-44, those most likely to have school-age children

Migration from Iowa counties varies significantly. Figure 2.4 shows the

percent of migration among these three groups. Table 2.4 analyzes data from the map.

A summary of Iowa's 99 counties shows that from 1960 to 1970:
42 Iowa counties had in-migration of the 0-14 year old group.
7 Iowa counties had gains in the 20-29 year old group. Story and Johnson were affected by the universities located there. The other counties were Polk and Warren, in the area around Des Moines, Black Hawk (Waterloo), Linn (Cedar Rapids), and Scott (Davenport).
25 Iowa counties had an in-migration in the 30-44 age group.

Statewide, the age groups suffering the greatest out-migration were:
20-24 year olds—24.3%
25-29 year olds—18.3%
15-19 year olds— 7.8%
35-39 year olds— 5.9%
10-14 year olds— 5.0%

The 0-14 age group makes up 27.4% of Iowa population but accounted for 2.06% of net out-migration from 1960 to 1970. The 20-29 age group makes up 15.3% of the Iowa population but accounted for 54.3% of total out-migration. The 30-44 age group accounted for 15.5% of the population but contributed only 5.05% of total out-migration. Iowans over 30 accounted for 47.9% of total population but only 23.8% of the out-migration.

Significance of this out-migration of 20-29 year olds can be shown by relating it to the percentage of the population they represent along with the percentage of the total out-migration by this age group. This is done in Table 2.5. Because out-migration of 20-29 year olds is crucial to future school enrollments, Table 2.6 is significant.

Such profound out-migration among the 20-29 age group should reduce Iowa's population in the childbearing age group greater than the national average. It is impossible to determine whether many of the 20-29 year olds return to Iowa in their late twenties and early thirties. The loss of 21.8% of this age group in ten years reduces the percentage of people in the childbearing age and affects the birthrate. This factor of distribution of population by age groups will be covered in Chapter 3.

Table 2.1—Population Growth and Projections— Iowa and the United States—1900 to 2020

	Iowa				United States			
	1.8 Fertility Rate		2.1 Fertility Rate		1.8 Fertility Rate		2.1 Fertility Rate	
Decade	Population 1,000s	% of Growth	Population 1,000s	% of Growth	Population 1,000s	% of Growth	Population 1,000s	% of Growth
1900	2,232	———			75,995	———		
1910	2,225	− .3			91,972	21.0		
1920	2,404	+ 8.0			105,711	14.9		
1930	2,471	2.8			122,775	16.1		
1940	2,538	2.7			131,669	7.2		
1950	2,621	3.3			150,697	14.5		
1960	2,758	5.2			179,323	19.0		
1970	2,825	2.4			203,212	13.3		
Projected								
1980	2,933	3.9	2,989	4.5	220,732	8.6	222,159	9.3
1990	3,088	5.3	3,254	8.9	236,264	7.0	243,513	10.5
2000	3,203	3.4	3,367	3.5	245,876	4.1	260,378	6.1
2010	3,294	2.8	3,607	7.1	250,872	1.8	275,335	5.1
2020	3,356	1.9	3,866	7.2	253,011	0.9	290,115	5.4
Summary								
1900-1930		10.7				61.6		
1930-1950		6.1				22.7		
1950-1970		7.7				34.9		
1970-1990		9.3		15.2		16.8		20.6
1990-2020		18.8		36.8		31.5		44.7

SOURCES: U.S. Bureau of the Census, Decennial Census for Decades 1900 to 1970.
Iowa State Demographic Center, *Official Iowa Population Projections by Age and Sex, 1975-2020.*

Table 2.2—Iowa Population Growth by Decades—Births, Deaths, Growth, Out-migration—1930-75

Census Years	1930	1940	1950	1960	1970
1	2	3	4	5	6
Population (1,000s)	2,745	2,537	2,621	2,756	2,830
Births—Preceding Decade	468	418	515	635	543
Deaths—Preceding Decade	250	262	254	269	291
Potential Growth Births—Deaths	218	156	261	366	252
Potential Growth as a Percent of Preceding Census	9.1	6.3	10.3	14.0	9.1
Potential Population No Out-migration (1,000s)	2,618	2,631	2,892	3,258	3,510
Actual Growth by Decades (1,000s)	75	62	84	135	74
Percent of Population	3.1	2.5	3.3	5.1	2.7
Out-migration by Decades (1,000s)	143	94	177	231	178
Percent of Population	6.0	3.8	7.0	8.8	6.5
Out-migration as a Percent of Potential Growth	65.6	60.2	67.8	63.1	70.6

SOURCES: Division of Vital Statistics, Iowa Department of Health, Annual Reports, U.S. Decennial Census.

Table 2.3—Iowa Population Trends by Geographic Areas Population in 1,000s

	1900	1930	1950	1970	(Proj.) 1990	1900-70	(Proj.) 1970-90
United States	75,995	122,775	150,697	203,185		167.4	
Iowa	2,232	2,471	2,621	2,824	3,088	26.5	9.4
Iowa Counties							
16 NE Rural	302	290	292	282	304	− 6.4	+ 7.7
21 NW Rural	322	358	362	377	351	+ 17.1	− 6.8
8 WC Rural	154	150	137	120	120	− 21.6	+ 4.9
18 S Rural	329	280	240	191	196	− 42.0	+ 2.8
6 C Rural	148	138	133	140	167	− 5.2	+19.3
12 SE Rural	250	220	126	213	236	− 14.9	+10.3
Total Rural	1,504	1,436	1,382	1,283	1,363	− 14.7	+ 6.2
18 Urban	728	1,035	1,239	1,541	1,725	+111.7	+39.2
Percent Urban	32.6	41.9	47.3	54.6	55.9		

Figure 2.1—Population Growth by Decades, Iowa and the United States 1900-2020, Index of 1900 Population

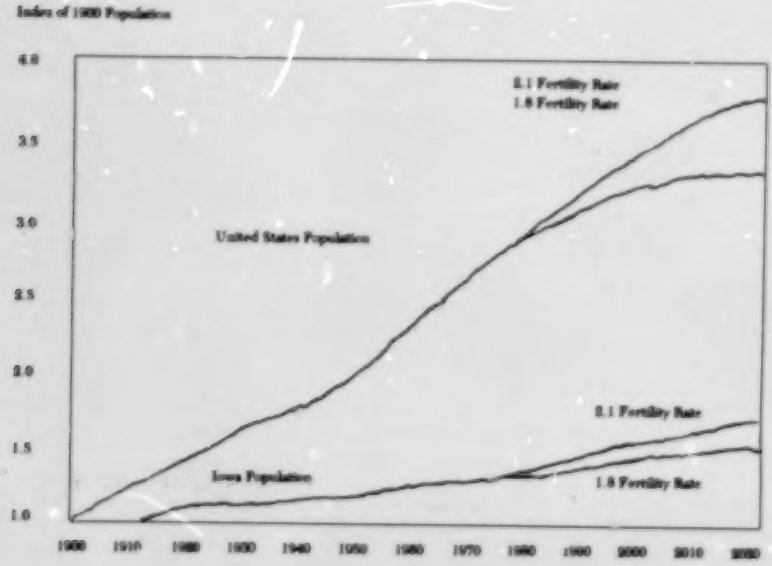


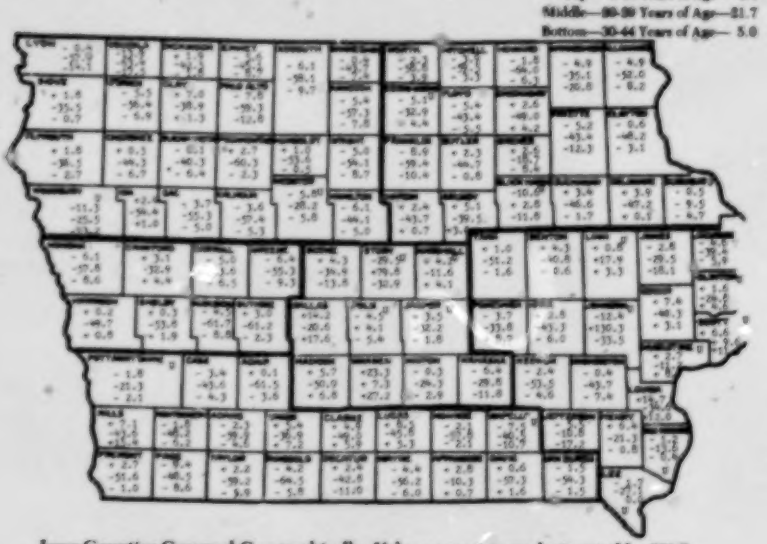
Figure 2.2—Net Migration by Counties 1960 to 1976

Iowa Total & Percent
1960-70—181,460 -6.1
1970-76— 38,000 -1.3
1960-76—219,460 -7.4

KEY
Top—Migration from 1966-76
Middle—Percent of Migration from 1960-70
Bottom—Percent of Migration from 1970-76

Figure 2.3—Iowa Population by Counties 1950, 1970, 1990

Figure 2.4—Percent of Net Migration by Three Age Groups, 1960 to 1970



Iowa Counties Grouped Geographically. Urban counties are designated by "U."

Table 2.4—Percent of Net Migration, by County Groups for the Ten Years 1960-70

City and Area	Number of Counties	TOTAL		Percent of Migration 1960-70					
				0-14 Years		20-29 Years		30-44 Years	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
TOTAL IOWA	99	- 101,000	- 4.1	- 10,000	- 2.1	- 68,607	- 21.9	- 20,159	- 5.0
DES MOINES									
Marshalltown, Newton	10	- 15,000	- 3.9	+ 73	+ 0.05	- 9,407	- 9.5	- 2,323	- 0.7
CEDAR RAPIDS	7	- 9,000	- 2.9	+ 1,100	+ 1.4	- 4,727	- 11.4	+ 75	+ 0.2
DAVENPORT									
Clinton, Muscatine	7	- 2,405	- 0.9	+ 3,000	+ 3.3	- 5,200	- 11.9	+ 507	+ 1.1
BURLINGTON									
Ft. Madison, Keokuk	4	- 9,205	- 5.1	+ 241	+ 0.9	- 4,102	- 21.9	+ 139	+ 0.7
WATERLOO									
Cedar Falls	7	- 10,500	- 6.9	- 3,500	- 3.9	- 7,700	- 10.9	- 3,005	- 7.2
DUBUQUE	5	- 11,000	- 8.2	- 607	- 0.8	- 6,000	- 25.4	- 1,704	- 4.5
OTTUMWA	5	- 15,900	- 10.5	- 1,900	- 4.3	- 9,500	- 40.3	- 1,701	- 9.1
COUNCIL BLUFFS	6	- 14,670	- 9.8	- 200	- 0.3	- 9,000	- 34.7	- 777	- 3.0
MASON CITY	9	- 21,100	- 11.5	- 2,095	- 4.1	- 13,700	- 46.9	- 1,475	- 5.5
SIOUX CITY	6	- 24,500	- 11.8	- 3,500	- 6.3	- 9,555	- 29.9	- 2,900	- 9.5
FORT DODGE	8	- 24,000	- 13.7	- 1,400	- 3.0	- 12,500	- 43.9	- 1,904	- 7.0
TOTAL AREA AROUND CITIES		- 163,430		- 9,382		- 90,674		- 15,000	
Less Duplications		- 22,500		+ 940		- 14,939		- 2,053	
TOTAL URBAN ORIENTED	66	- 140,913	- 6.60	- 7,500	- 1.14	- 71,735	- 35.45	- 12,940	- 2.95
NW IOWA RURAL	21	- 41,500	- 11.00	- 2,151	- 2.2	- 20,706	- 49.0	- 2,503	- 4.0
SOUTH IOWA RURAL	10	- 24,937	- 13.3	+ 87	+ 0.06	- 10,170	- 40.6	- 960	- 3.06

COUNTIES INVOLVED:
Des Moines Area —Boone, Marshall, Dallas, Polk, Jasper, Mahaska, Warren, Marion, Clarke, Lucas (Grand River)
Davenport —Scott, Jackson, Cedar, Clinton, Scott, Muscatine, Louisa
Cedar Rapids Area—Buchanan, Delaware, Benton, Linn, Jones, Iowa, Cedar (Visit Johnson)
Burlington Area —Louisa, Henry, Des Moines, Lee
Waterloo Area —Butler, Bremer, Buchanan, Black Hawk, Grundy, Tama, Benton
Dubuque Area —Clayton, Delaware, Dubuque, Jones, Jackson
Ottumwa Area —Mahaska, Keokuk, Monroe, Wapello, Jefferson, Appanoose, Davis, Van Buren
Council Bluffs Area —Harrison, Shelby, Pottawattamie, Montgomery, Mills, Fremont
Mason City Area —Winnebago, Worth, Mitchell, Hancock, Cerro Gordo, Floyd, Wright, Franklin, Butler
Sioux City Area —Plymouth, Cherokee, Ida, Woodbury, Monona, Crawford
Fort Dodge Area —Pocahontas, Humboldt, Wright, Calhoun, Webster, Hamilton, Greene, Boone
RURAL AREAS —See outlined areas on map (Figure 0.7)

SOURCE: Iowa State Department of Health and Office for Planning and Programming, Net Migration by Age and Sex, 1960 through 1970

Table 2.5—Significance of Out-migration by Age Groups, 1960-70

Age Group	Number in Population	% of Iowa Total	Net Migration Number	% of Age Group	% of Iowa Out-migration
ALL AGES	2,974,754	100.0	−181,460	− 6.1	100.0
0-4	234,454	7.9	+ 2,579	+ 1.1	− 1.4
5-9	276,600	9.3	− 4,548	− 1.5	2.3
10-14	305,580	10.3	− 5,279	− 5.0	8.4
TOTAL 0-14	816,434	27.4	− 6,848	− 2.06	9.3
15-19	294,205	9.9	− 22,948	− 7.8	12.6
20-24	256,066	8.6	− 62,224	−24.3	34.3
25-29	198,213	6.7	− 36,273	−18.3	20.0
TOTAL 15-29	748,484	25.2	−121,445	−29.5	66.9
TOTAL 20-29	454,279	15.3	− 98,497	−21.7	54.3
30-44	482,333	15.5	− 23,359	− 5.05	12.9
45-64	585,312	19.7	− 14,769	− 2.5	8.1
65-over	378,456	12.7	− 5,041	− 1.3	2.8
TOTAL over 30	1,424,101	47.9	− 43,169	− 3.03	23.8

SOURCE: Iowa State Department of Health and Office of Planning and Programming, *Iowa: Net Migration by Age and Sex, 1960-70*

Table 2.6—Migration of 20-29 Year Olds in the 1960-70 Decade Rural-Suburban Classifications

	Total Iowa Number	Rural Number	Suburban Number	Urban Number
Total Counties	99	73	8	18
Migration				
−60-65%	5	5	0	0
−50-60%	30	29	1	0
−40-60%	29	26	0	1
−30-40%	14	11	1	2
−21.8-30%	2	2	2	5
Above State Av	80	73	4	8
Below State Av	19	0	4	10
−10-21.7%	6	0	3	3
−0-10.0%	1	0	0	1
+0-10.0%	4	0	1	3
+10-20%	1	0	0	1
Over 20%	2	0	0	2

CHAPTER 3—ANALYSIS OF IOWA POPULATION BY AGE GROUPS WITH REFERENCE TO EFFECT UPON SCHOOL POPULATIONS

Table 3.1 illustrates both a 1.8 fertility rate with a high out-migration rate in 1980-2020 projections and a 2.1 fertility rate with a lower out-migration rate. In this discussion, Table 3.1 with the 2.1 fertility rate and low out-migration factor will be used. Also significant to material presented in Chapter 4, Table 3.2 traces fertility rates, number of women ages 15-44, and births from 1920 to 1975, projecting data to 2020.

For purpose of analysis this chapter isolates Iowa population into six age groups:

1. *Ages 0-19.* This is the population enrolled in schools. A high birthrate, up to eight births per woman per lifetime, and a short life span caused this group to loom large in the total population until after 1900. The "baby boom" of 1946-64 saw this group increase to 38.5% of the population in 1960 and 1970, but the lower birthrate starting in 1965 caused its drop to 34.7% in 1975. It is projected to drop to 31% in 1990, to rise slightly in 2000, and regress to 30.4% of total population in 2020.

2. *Ages 20-44.* The 20-44 age grouping is doubly important in this study:

   (a) It is the bulk of the child-producing age group. Less than 1% of Iowa births occur to women over 45 and just over 15% to those under 20.

   (b) It comprises over half the work force, defined as ages 20-64.

The 20-44 age group made up 35.7% of Iowa's population before 1900, dropped to 36.1% in 1930, 29.3% in 1960, and 28.9% in 1970. By 1975, this group reached 32.2% of the population, and is projected to reach 36.0% in 1980 and 38.8% in 1990. Because of reduced birthrates after 1964, the figure should drop to 33.6% by 2000. In 1965, proportions in these two age groups again reversed. The 20-64 age group increased and the 0-19 age group decreased as a percentage of Iowa's population. The size of this group is significant for its effect on both the work force and the number of women of childbearing age.

3. *Ages 45-64.* This group will contribute few children to the school population. Because of longer life and small number of births per woman, this group has increased as percentage of total population. It was 13.4% of the total before 1900, 19.1% in 1930, 21.3% in 1950, 20% in 1975, and is projected at 19% in 1980, 17.2% in 1990, and 21.4% in 2000.

The 45-64 age group is added to the 20-44 age group to establish the work force.

4. *Over 65 Years.* Longer life increased the percentage of this group in the total population. This group neither contributes to the work force nor produces children of school age. This group was 4.1% of the population in 1900, 7.5% in 1930, 10.4% in 1950, and 12.4% in 1970. The low birthrate of 1930-46 should reduce the size of this group beginning in 1995. Those born between 1946 and 1964 will not join this age group until 2011.

5. *The Work Force, Ages 20-64.* The work force defined here is the total of men and women in the 20-64 age group. Numerically as a percentage of the population, the true work force has increased considerably as women have become a larger percentage of total workers. In this discussion the total of women and men is used without reference to actual employment. A more thorough discussion of this age group's broader economic significance is available in Chapter 3 of the research cited at the beginning of this monograph.

From 1930 to 1950, the percentage of the population 0-19 years old declined and the percentage in the 20-64 age group increased. Yet the number of births was small—sometimes only 2.19 births per woman per lifetime.

From 1950 to 1970, the proportions in those two age groups reversed. The percentage 20-64 declined and the percentage under 19 increased. A small work force increased economic security and women bore more children, as many as 3.77 per lifetime.

In 1980, proportions in these two age groups will again reverse. The 20-64 age group will increase and the 0-19 age group will decrease as a percentage of Iowa's population. There appears no prospect of the work force dropping below 50% of the population up to 2020.

6. *Women in the Childbearing Age, 15-44.* Before 1900, women ages 15-44 made up 22.2% of Iowa's population, 23% in 1920, and a low of 19.8% in 1960. From 1946-64, with the historically smallest percentage of women in the 15-44 age group, Iowa saw a record high in births. The percentage of the population which includes women of childbearing age started to increase in 1961 as the 1946 births reached age 15. By 1990, women ages 15-44 should again reach 23% of Iowa's population.

Projections of Births to 2020

The upturn in births since 1973 is evident. The data interpretation suggests a rounding off in 1985-93 at from 49,000 to 54,000, depending upon whether the inclination to bear children is at 1.8 or 2.1 births per woman in a lifetime. The 1964-77 low fertility rate will reduce the number of women of childbearing age after 1985 and should start the third cycle of low births since 1930.

The number of women of childbearing age is less significant to the

number of births than the percentage of the population in the work force. This researcher has discovered an inverse correlation between the number in the 20-64 age group and the number of births. When the work force falls below 50% of the total population, as from 1950 to 1970, jobs are plentiful and women choose to bear more children, as Table 3.2 illustrates. Table 3.2 shows a work force of 55% to 60% of the population from 1980 to 2020. The births of 1946-64 will not reach 65 until 2011, so the work force likely will remain a high percentage of the population until after 2011. Thus, projections are for births to increase to about 54,000 by 1990 and to drop after 1990. These data are shown in tables and maps in Chapter 4 on births and enrollments.

Table 3.1—Percent of Iowa Population in Specific Age Groups

	0-19	20-44	45-64	65 & up	Work Force 20-64	Women 15-44
Actual Projection:						
1920	38.8	37.6	17.3	6.0	54.9	23.0
1930	37.3	36.1	19.1	7.5	55.2	22.5
1940	33.7	36.1	21.2	9.0	57.3	22.6
1950	34.0	34.3	21.3	10.4	55.6	20.8
1960	38.5	29.3	20.4	11.9	49.6	18.8
1970	38.3	28.9	20.5	12.4	49.4	19.6
Projected: 1.8 Fertility with High Out-migration						
1980	31.9	35.6	19.4	13.1	55.0	22.6
1990	29.0	39.1	18.2	13.8	57.2	23.0
2000	27.8	36.6	22.0	13.5	58.7	21.7
2010	25.4	33.2	27.6	13.7	60.9	19.7
2020	24.5	32.1	26.5	16.9	58.6	18.9
Projected: 2.1 Fertility with Low Out-migration						
1980	32.3	36.0	19.0	13.0	54.9	22.8
1990	31.0	38.8	17.2	13.0	56.1	22.8
2000	32.4	33.6	21.4	12.6	54.9	22.3
2020	30.4	34.1	21.1	14.4	55.2	20.4

SOURCE: U.S. Census Reports. Iowa State Demographic Center, *Projection of Iowa Population by Age and Sex 1975-2020.*

Table 3.2—Significant Factors in Determining School Enrollment—Women of Childbearing Age, Fertility Rates—1980 to 2020

Year	Iowa Population 1000s	Work Force 20-64 Yrs. 1000s	Work Force 20-64 Yrs. %	Women 15-44 Yrs. 1000s	Women 15-44 Yrs. %	Fertility Rate	Births	Birthrate Per 1000 Population
1920	2,400		55.0	553	23.0	88.3	48,815	20.3
1930	2,475		55.2	555	22.5	77.0	42,733	17.3
1940	2,537		57.3	574	22.7	77.2	44,347	17.5
1950	2,621		55.6	545	20.8	114.8	62,550	23.9
1960	2,756		49.7	515	18.7	124.5	64,050	23.2
1970	2,825	1,395	49.4	555	19.7	87.3	48,406	17.1
1975	2,879	1,501	52.1	611	21.2	66.0	41,360	14.0
				Projections				
						Births at Fertility		Gross Birth Rate
						66.0	124.5	66.0	124.5
1980	2,933	1,613	55.0	662	22.6	43,705	82,404	14.9	28.1
1990	3,088	1,766	57.2	711	23.0	46,946	88,557	15.2	28.7
2000	3,203	1,880	58.7	696	21.7	45,929	86,640	14.3	27.0
2010	3,293	2,004	60.9	659	19.7	42,887	80,882	13.0	24.6
2020	3,557	1,966	55.2	634	17.8	41,851	78,945	11.8	22.2

SOURCE: Division of Vital Statistics, Iowa Department of Health, Annual Reports, Jim Taylor, Office of Planning and Programming, *Official Iowa Population Projections, July 1975.*

CHAPTER 4—TRENDS IN FERTILITY RATES AND BIRTHS WITH PROJECTIONS

Chapter 4 traces the history of births in Iowa and estimates births for the future. Along with number of births, data will be presented on fertility rates.

From 1927 to 1945, Iowa averaged 43,261 births a year, with a low of 39,579 births in the depths of the Depression. The "baby boom" of 1946-64 produced an average of 62,027 births a year, with a peak of 66,123 in 1951. From 1965 to 1977, the average was 44,832 a year, barely above the 1927-46 level and 27.7% below the 1946-64 average. From 1972 through 1977, the average was 41,408 births, 32.2% below the 1946-64 average. The low point was reached in 1973 with 38,898 births. There were 44,811 births in 1977.

Fertility Rates

Fertility rates are expressed in three ways:

1. *How many children will the average woman bear in a lifetime?* The U.S. Bureau of the Census pursues this question in projecting births and population. Iowa reached a low of 2.19 births per woman during the Depression and peaked at 3.77 births per woman during the 1946-64 "baby boom." Zero Population Growth is pegged at 2.1 births per woman in a lifetime. Births dropped below 2.0 in 1972 and averaged 1.8 from 1972 to 1976.

2. *How many births will there be among 1,000 women ages 15-44 in a year?* The 1930s saw a low fertility rate of 70.5 births per 1,000 women ages 15-44. The "baby boom" of 1946-64 saw the rate almost double to a peak of 124.4 in 1960. The 66.0 births per 1,000 women in 1975 is the lowest fertility rate on record. In 1973, the number of Iowa women ages 15-44 was 18.6% greater than in 1960, yet they produced 64.6% as many children. To produce as many children with a 66.0 rate as with a 124.4 rate, there would need to be almost twice as many women of childbearing age. The 711,000 such women projected for 1990 is 38.1% above the 1960 small number of women and large number of births.

As the lower birthrates move into the childbearing age group after 1990, the number of births should again decline.

3. *Births per 1,000 population.* This is the birthrate quoted most frequently. It is less meaningful than the fertility rate derived from the number of births per 1,000 of childbearing age. As the fraction of the population who are women age 15-44 changes, the birthrate will also change, but

by a smaller amount than the fertility rate. This can be observed from the right-hand column in Table 3.2.

Neither the number of births nor the birthrate per 1,000 population is clearly indicative of the fertility rate, that is, the number of births per 1,000 women ages 15-44. These data are shown in Figure 4.1 and Table 4.1.

Iowa Fertility and Births Compared to United States Data

The national fertility rate in 1910 was 126.8 births per 1,000 women ages 15-44, and Iowa's was 69.4 births. In 1920, the national rate was 117.9; Iowa's was 88.3. In 1930, the national rate was 89.2; Iowa's was 77.0. These rates are still higher than the 1975 low fertility rates of 66.8 for the United States and 66.0 for Iowa. The national fertility rate continued to decline to 65.3 in 1977.

During the 1946-64 period, Iowa's fertility rate stands a bit above the national average. Iowa's births declined by 41.2% from the 1951 peak of 66,123 births to the low of 38,898 births in 1973. The fertility rate for the United States in 1950 was 106.2, while in Iowa it was 114.8. In 1955, the United States had a fertility rate of 118.5; Iowa's was 120.1. In 1960, the fertility rate for the United States was 118.0, while for Iowa it was 124.5. National births declined from the peak of 4,300,000 in the 1960-70 decade to the low of 3,137,000 in 1973. Iowa has had a lower birthrate than the nation since 1960 and a greater drop in births than the national average, as shown in Figure 4.1, 4.2, and Table 4.1, which post U.S. data as well as Iowa data.

The similarity of fertility rates in Iowa and the nation since 1973 suggests that the major differences in the decline in births between Iowa and the United States (41.2% for the United States and 27.0% for Iowa from 1950 to 1973) must be related to the large out-migration of the 20-29 age group. Iowa has seen an increase in births since the 38,898 low in 1973. There were 15.2% more births (44,811) in 1977 than in 1973 and 7.5% more in 1977 than in 1976 (41,698). This increase may perhaps be attributed to the increased number of women ages 15-44, to a slower out-migration since 1970, or to an increase in births to unwed teenagers—4.4% of all births (1,820) in 1970 and .07% (438) in 1950 was 0.7% (438).

Births and School Enrollments

Table 4.2 shows what effect the decline in births from 1965 to date will have on school enrollments.

The information presented in Table 4.2 suggests that enrollments in Iowa schools will drop by 79,584 in the next five years. Markedly fewer

students are entering the public school system than are graduated from it. Note that the 1978-82 senior-high classes will be populated from an estimated 304,377 births, whereas kindergartens during 1978-82 will be populated from an estimated 205,759 births.

Table 4.1—United States and Iowa Fertility Rates, Birth Rates, and Live Births 1960-1983

1	2	3	4	5	6	7
Year	U.S. Births in 1,000s	U.S. Fertility Rate	Iowa Fertility Rate	U.S. Birthrate	Iowa Birthrate	Iowa Births
1960	4,258	118.0	124.5	23.7	23.2	64,050
1961	4,268	117.2		23.3	23.0	63,408
1962	4,167	112.2		22.4	22.2	61,002
1963	4,098	108.5		21.7	21.1	57,840
1964	4,027	105.0		21.0	20.2	55,443
1965	3,760	96.6	95.0	19.4	18.6	50,970
1966	3,606	91.3		18.4	17.6	48,641
1967	3,521	87.6		17.8	16.9	47,217
1968	3,502	85.7		17.5	16.7	46,737
1969	3,600	86.5		17.8	16.8	47,235
1970	3,731	87.9	87.3	18.2	17.1	48,406
1971	3,556	81.9		17.2	15.8	45,171
1972	3,258	73.4		15.6	14.2	40,860
1973	3,137	68.9	67.5	14.9	13.6	38,898
1974	3,160	65.4		14.9	14.1	40,179
1975	3,149	66.8	66.0	14.7	14.4	41,360
1976	3,163	65.6		14.7	14.5	41,698
1977	3,266	65.3			15.6	44,811
			Projected			
1978	3,389	66.1				45,629
1979	3,541	67.5				46,447
1980	3,687	69.5				47,265
1981	3,781	71.5				48,083
1982	3,836	72.5				48,901
1983	3,872	72.9				49,718

Definition of Terms. Columns 3 and 4 (Fertility Rates) = The number of births in a year per 1,000 women, ages 15-44. Columns 5 and 6 (Birthrates) = The number of births in a year per 1,000 total population.

SOURCES: Iowa Department of Health, Division of Vital Statistics, *Vital Statistics of Iowa, 1975*; U.S. Department of Commerce, Bureau of the Census, *Projections of Population of the United States, 1977 to 2050*, Series P-25, Number 704, July 1977.

Table 4.2—A Comparison of Births of Graduating Seniors and Incoming Kindergarten Students September 15-September 14

School Year	Seniors		Kindergarten			
	Birth Year	Number	Birth Year	Number	Difference	Estimated Enrollment Drop
1978-79	59-60	64,154	72-73	39,473	24,681	19,918
1979-80	60-61	63,396	73-74	39,790	23,606	19,211
1980-81	61-62	61,708	74-75	41,009	20,699	16,704
1981-82	62-63	58,767	75-76	41,597	17,170	13,856
1982-83	63-64	56,152	76-77	43,890	12,262	9,895
TOTAL		304,377		205,759	98,618	79,584
1983-84	64-65	52,281	77-78	45,387	6,894	5,563
1984-85	65-66	49,323	78-79	46,205	3,118	2,516
1985-86	66-67	47,634	79-80	47,023	611	493

Figure 4.1—Birthrates per 1,000 Total Population—Iowa and the United States

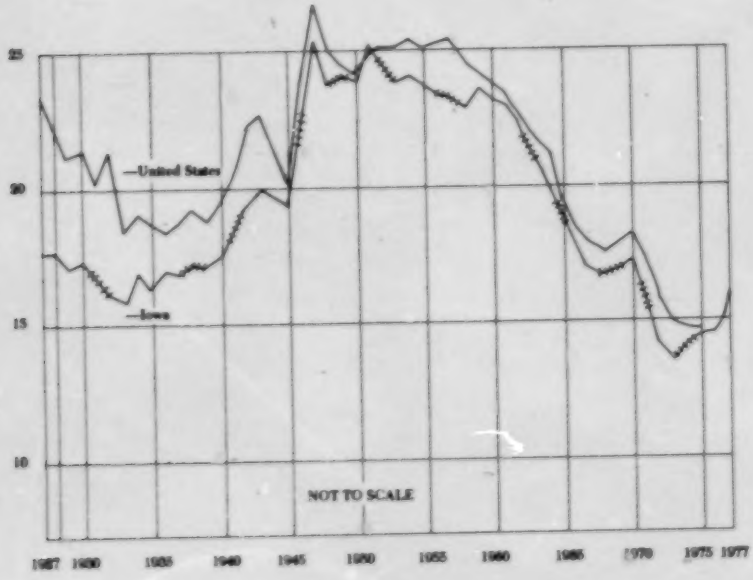
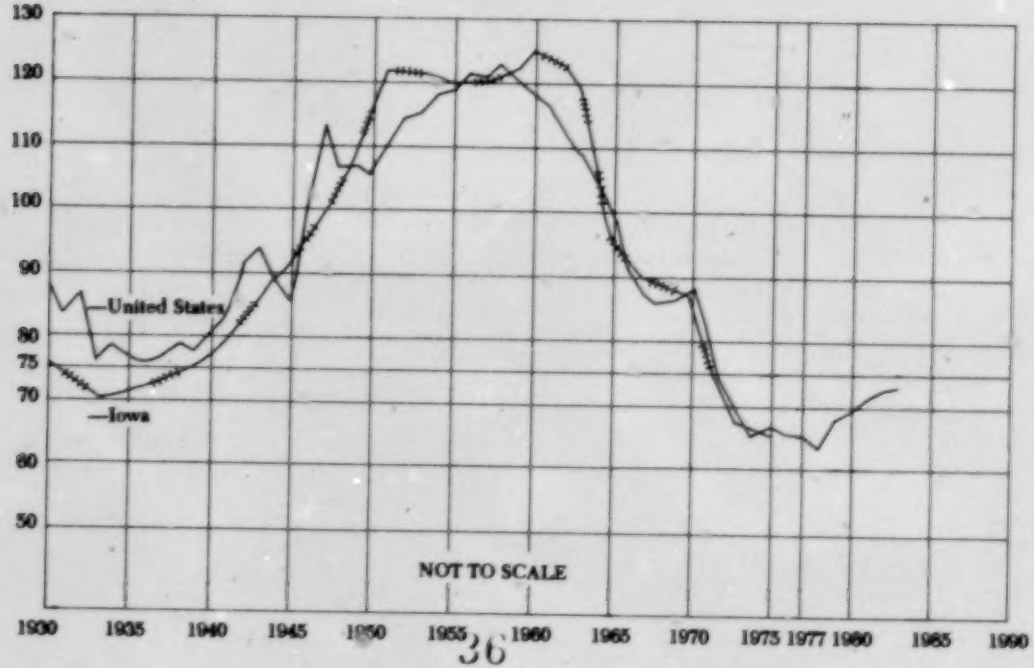


Figure 4.2—Fertility Rates—Iowa and the United States



CHAPTER 5—PUBLIC SCHOOL ENROLLMENTS AND PROJECTIONS

Chapter 5 reports enrollment trends in Iowa to 1977 and projects enrollment beyond the end of the century based upon established trends. Enrollment data have been summarized four ways: (1) by school, (2) by county totals, (3) for the 15 Area Education Agencies, and (4) for the state. Two types of projections are used in this study: (1) a projection of total enrollment in Iowa, public and private (Table 5.1), and (2) a projection of total enrollment for each of Iowa's 449 school districts for 1982 and 1987, which appears in Table 5.2.

Projections of Total Iowa Enrollment

This projection uses a survival ratio from birth to school enrollment five to 18 years later. Table 5.1 shows five-year increments from 1960-61 to 1977-78 and projects enrollments into the future. Entries for significant years are also apparent.

A guide to understanding Table 5.1:

Column 1

The school year starting in September.

Column 2

The births from which come the spring high school graduates. This figure is deducted from the 13-year total each year.

Column 3

The births which produced the kindergarten classes in the fall. It is added as the spring-graduate births are deducted.

NOTE: Columns 2 and 3 are BIRTHS and not actual enrollments—*please do not confuse with enrollments for grade 12 the previous year and for the kindergarten for the current year*. Columns 2 and 3 indicate September 15 to September 14 births, *not births per calendar year*, to conform with kindergarten eligibility—five years old by September 15 of the kindergarten year. Beyond 1982-83, births are computed by applying a 2.1 fertility rate to the number of women ages 15-44 as projected by the Iowa State Demographic Center.

Column 4

Potential enrollment—13 years of births. This is the sum of the BIRTHS for the 13 years that populate K-12 grades. If there were no migrations, deaths, or dropouts, these figures would tally the public and private enrollment for that school year.

Column 5

Survival ratio from birth to school enrollment five to 18 years later. For the period 1956-57 to 1977-78, ratios were obtained by dividing the actual enrollment in public and private schools in each year (Column 6) by the potential enrollment shown in Column 4. Column 5 is the first variable in the projection. It is affected by deaths, migration, and holding power of the school. In Table 5.1 this factor is used.

From 1956 to 1963, survival ratios declined (.903 to .879) and from 1963 to 1977 increased (.879 to .942). This suggests less out-migration from Iowa after the 1963 birthrate decline and possibly a greater holding power for the schools.

What figure should be used in projecting enrollment beyond 1977? The survival ratio has increased by .0045 a year since 1963-64. The 1977-78 enrollment showed the highest survival ratio—.942—but 94.2% of Iowa births in school is a high ratio, allowing 5.8% in deaths, dropouts, and out-migration. Part of the increase from 1975 to 1977 came with the organization of the AEAs, which for 1977-1978 identified 2,067 severely handicapped children and 5,222 more with learning disabilities necessitating self-contained classes, thus boosting enrollments. From now on, the decline in these two groups should compare with general school declines. Therefore, this researcher has advanced the survival ratio from the .942 in 1977-78 (actual) to .950 for 1981-82 and thereafter as the best inference available.

Column 6

Private and public school enrollment. For 1960 to 1977, the figures presented are the head count compiled each September by the Department of Public Instruction. For 1978-79 and thereafter, enrollment is obtained by applying the survival ratio in Column 5 to the potential enrollment in Column 4.

Column 7

Private enrollment is from data collected by the DPI each September. The high private enrollment was the 104,175 figure in 1965-1966 (underlined). From 1965-66 to 1975-76, private school enrollment plummeted from 14.28% of total enrollment to 8.94% (from 104,175 students in 1965-1966 to 59,999 in 1975-76).

Since 1973, private enrollments have declined little more than public school enrollments. Later tables show increases in private school enrollments in some AEAs.

Based upon established trends, private school enrollments are estimated at 8.8% of public enrollments in projections of future enrollments.

Column 8

Public enrollment. This is the objective of this study. *What enrollment can be expected?* It is found by applying a total survival ratio to Column 4, potential enrollment.

Column 9

Expected change in public school enrollment from the previous year.

Observations on Public School Enrollment Trends

At several times in this study, actual and projected enrollments have been quoted as functions of trends in population, migration, age groupings or births. Table 5.1 is specific. A recap shows:

1965-66 Highest Private Enrollment	104,175
1967-68 Highest Total Enrollment	746,166
1969-70 Highest Public Enrollment	659,888
1984-85 Low Total Enrollment (2.1 Fertility)	564,434
1987-88 Low Total Enrollment (1.8 Fertility)	543,854
1997-98 Enrollment Peak (2.1 Fertility)	643,774
2002-03 Enrollment Peak (1.8 Fertility)	610,074

Table 5.1 uses both 1.8 and 2.1 fertility rates and different out-migration rates. Using September 1976 enrollments and survival ratios suggested by data through 1976, the September 1982 enrollment is estimated at 506,990, slightly less than the 507,550 located by September 1977 data. The formula that projects school-by-school data uses 506,990 as a base.

Full Circle in 40 Years: An Analysis of Enrollment Cycles

The top line in Figure 5.1 represents potential enrollment. It accumulates 13 years of births and extends them to make up the potential school enrollment five to 18 years later. The data assume no deaths, out-migrations, or dropouts. It is the same information as Column 4 in Table 5.1.

The middle line is the actual September enrollments in both public and private schools. It is the same information as Column 6 in Table 5.2. The bottom line is the actual public school enrollment. It is the same information as Column 8 in Table 5.1. Two fertility rates are used in the projection of enrollments beyond 1977. The forked line to the right in Figure 5.1 illustrates a 2.1 fertility rate and a 1.8 fertility rate. Both projections are drawn from estimates by the Iowa State Demographic Center.

"Full Circle in 40 Years" refers to the trend in enrollment from the 1948 low through the 1969 peak to a 1985 low. Twenty-one years passed between the 1948 low of 456,624 to the 1969 high of 659,888. It is estimated that another 20 years will pass toward a low of 494,000 to 498,000 between 1985 and 1988. The uptrend in enrollments coincides with the 19-year "baby-boom" of 1946-64; the downtrend follows the rapid drop in births after 1964. With a 1.8 fertility rate, enrollments should peak about 2002; with a 2.1 fertility rate, the peak is projected to occur in 1999.

Projection of Enrollment for Individual Schools

A projection is just that—an estimate of future enrollment which can be used in planning. Such a projection involves greater variations than total state enrollment. The variables average out in a statewide projection, but local projections can be accurate only if those variables repeat past patterns in the future. Generally, data are gathered in five-year increments; consequently, results are governed by variables pertaining within that period.

Three types of occurrences influence variables within the period and may reduce validity of long-term projections for a single school:

1. Enrollment declines three or four years, then reverses during the

fourth or fifth year. This upturn would be undetected in projections using a five-year survival ratio.

2. Enrollment increases three or four years, then declines. The decline would be obliterated by earlier increases.

3. Enrollment remains stationary two or three years, then increases or decreases at either end of the five years.

In doing projections for individual schools, this writer uses a grade-to-grade survival ratio. Kindergarten enrollments are established by comparing births that populated one year's kindergarten with births that populated kindergarten classes the preceding year. The state variance is used as a guide, and is compared to county and multi-county birth variances. The method here includes variance in established factors.

This second projection by individual schools identifies a state total enrollment for 1982 of 508,206 compared to the 506,990 obtained in the first projection. The difference of 1,218 is a variance of .0024, or 2.4 students in a school enrolling 1,000 students—an insignificant discrepancy. The projection formula for individual schools assumes that schools will show the same relative trends from 1972-82 as they did from 1972-77. The relative trend is in relation to state enrollment trends. If a school declined by more or less than the state total, this factor is incorporated in 1982 enrollment projections.

The formula is a ratio:

$$\frac{\text{Local 1982 Enrollments}}{\text{1977 Enrollments}} = \frac{\text{Local 1977 Enrollments}}{\text{1972 Enrollments}}$$

$$\frac{\text{State 1982 Enrollments}}{\text{1977 Enrollments}} \qquad \frac{\text{State 1977 Enrollments}}{\text{1972 Enrollments}}$$

$$\text{Local } \frac{1982}{1977} = \text{Local } \frac{1977}{1972} \times \left(\text{State } \frac{1982}{1977}\right) \Big/ \text{State } \frac{1977}{1972}$$

The state data in the parenthesis is a constant. State $\frac{1977}{1972}$ is known:

1977 Enrollment is	587,113
1972 Enrollment was	645,947
The quotient is	.9089

The 1982 state enrollment is completed by 1976 data—506,990.

The 1982 enrollment is projected at	506,990
The 1977 enrollment is	587,113
The quotient is	.8635305
The constant state factor is	$\frac{.8635}{.9089} = .9501$

This factor (.9501) is a constant in computing the 1982 enrollment for each school. The simplified formula is:

$$\text{Local 1982 Enrollment} = \text{1972 Enrollment} \times \text{Local } \frac{\text{1977 Enrollment}}{\text{1972 Enrollment}} \times .9501$$

Table 5.1 is the state projection. See Table 5.2 for projections by individual districts. The tables following designate which projection is used. In any combination of schools, such as by enrollment size or AEA, the individual school projections are used.

Geographical Trends in Enrollment

Demographic factors in this study have been analyzed by geographical area (Table 5.3). Later, the change will be noted by Area Education Agencies, by size of school, and by the 25-mile areas surrounding Iowa's 20 urban centers.

The following enrollment trends by geographic areas stand out:

1. Many Iowa rural counties reached an enrollment peak long before the state high year of 1969-70.

2. From 1969 to 1977 the northwestern Iowa rural counties dropped the most (21.7%), followed by the southern Iowa rural counties (20.9%)—both nearly double the state loss of 11.03%.

3. From 1977 to 1982 southern Iowa counties lead in potential declines (-22.5%), compared to an expected state drop of 13.5%. When urban counties in the area are added, the decline in the southern Iowa counties is greater than declines projected for rural counties alone.

Table 5.3 selects Iowa counties whose enrollment trends from 1969 to 1977 varied from the state drop of 11.03%. These counties were used previously to show extreme variations in population trends, in percentage of migration, and in number of births. In line with population, outmigration, and birth trends, the enrollment declines in several Iowa counties have been catastrophic. For example, Osceola, in far northwest Iowa, declined 37.2% from 1961 to 1977, and in 1982 could enroll 48 students for each 100 enrolled in 1961. As a state average, Iowa is expected to enroll 77 students in 1982 for each 100 enrolled in 1967.

Six of the 18 urban counties reached a peak in enrollment before 1969, but none earlier than 1967. Seven counties have had peak enrollments since 1969. Some industrial counties have suffered smaller enrollment declines than the state average and could continue that trend to 1982 and 1987. For example Scott County could enroll 90 students in 1982 for each 100 enrolled in 1975.

If percentage of total Iowa enrollment is considered, the northwest and southern rural Iowa counties have lost ground since the high enrollment year and likely will continue to drop in percentage of students enrolled. By adding urban counties in southern and western Iowa to the

rural counties, the expected future decline is greater than for rural counties alone. The ten central Iowa counties and the 20 southeastern Iowa counties could continue to educate a larger share of Iowa's students than in 1969 or 1977.

Enrollment Trends in Iowa Cities

Table 5.4 shows enrollment trends for Iowa's 22 cities exceeding 10,000 population and adds 12 cities that have enrolled 3,000 students at any time since 1967. Of the 22 cities, nine are expected to drop 33% from their high year to 1987, compared to a state drop of 23.7%. The seven largest cities have been grouped alone, because their 1977 enrollments exceeded 10,000 students. Dubuque has been further isolated because it absorbed enough private school students from 1969 to 1976 to give it an increase of 17% (2,067 students). It declined 1,050 students from 1976 to 1977.

The six largest cities (excluding Dubuque) enrolled 22.5% of Iowa's public school students in 1969, 21.1% in 1977, and could drop to 20.6% in 1982. Only Davenport lost less than the state average of 11.03% in those eight years. Waterloo lost 23.1% from its high year and could drop another 21.1% by 1982. The group declined 3.9% from 1976 to 1977 compared to a state drop of 2.7% for the same period.

The 12 cities enrolling more than 3,000 students dropped 9.8% from 1969 to 1977, 1.2% below the state average. They dropped 2.2% from 1970 to 1977, less than the state average of 2.7%. They are projected to lose 13.5% more to 1982, below the state drop of 13.6%. Among those cities, Mason City has lost 26.6% from the high year, Ottumwa 20.3%, and Fort Dodge 19.3%. West Des Moines gained 9.0% and Marshalltown gained 0.2%, although it fell 7.5% from 1971 to 1977.

Table 5.4 includes two categories of schools enrolling over 3,000 students: those that enrolled 3,000 students at some time but were below 3,000 in 1977, and those that belong to fast-growing suburbs surrounding Iowa's cities. Four are suburbs of Des Moines (Ankeny, Southeast Polk, Urbandale, and Indianola). West Des Moines could be added as a Des Moines suburb. Linn-Mar is a suburb of Cedar Rapids; North Scott and Bettendorf are suburbs of Davenport; Western Dubuque is a suburb of Dubuque.

Effect of Industrialization on School Enrollments

Table 5.5 groups those schools around the central city and analyzes enrollment trends by proximity to the central city. Of Iowa's 449 schools, 67 showed increases in enrollment from 1969-71, 41 by more than 5.5%.

Of those, only six lie beyond commuting distance from an industrial center.

Table 5.5 illustrates Des Moines's influence on suburban growth (Item 13). Eighteen of 34 school districts in the Des Moines area increased, and 16 declined. Metro Des Moines (Des Moines, Urbandale, and Saydel) lost 9,210 students (-17.9%) from 1969-77, while the surrounding area gained 3,267 (9.3%). Muscatine, Davenport, Clinton, and Dubuque had significant effects on enrollment in the area. The Muscatine area dropped 4.8%; the 25-mile radius around Davenport saw a 1.1% drop; Clinton gained 1.3%; Dubuque gained 8.5%. These five areas are projected to drop less than the state projected drop of 13.6% from 1977 to 1982. Of the 67 districts with enrollment increases from 1969 to 1977, a majority lies within those five areas. Only five districts in these five areas declined more than the state average.

Identical trends are evidenced within the 25-mile radius surrounding major cities. From 1969 to 1977, for example, the Fort Dodge area enrollment fell 19.8%, Mason City 17.0%, Sioux City 15.8%, Ottumwa 15.4%, Waterloo 11.9%, and Council Bluffs 11.2%. Similar trends are projected for the future: in 1982 the Fort Dodge area is expected to enroll 59 students for 100 enrolled in 1969; Mason city 69 for every 100 in 1969; Sioux City 73; Ottumwa 71; Waterloo 76.

Enrollment Trends by Size of School

This section of Chapter 5 describes variations in trends among enrollment categories previously defined. Figure 5.2 distributes Iowa's 449 school districts among those categories and shows how each category ranks in number of schools and in number of Iowa students enrolled.

The 49 schools enrolling fewer than 300 students comprise 10.9% of Iowa's 449 districts, but enroll only 2.0% of Iowa's students. The 159 schools enrolling under 500 in September 1977 comprise 35.4% of Iowa's school districts, but they enroll only 11.4% of Iowa's 587,113 students. At the other extreme, the seven schools enrolling over 10,000 students are 1.7% of Iowa's districts, but they enroll 23.4% of Iowa's students. The 28 schools enrolling more than 3,000 students comprise 6.3% of Iowa's districts, but they enrolled 42.0% of Iowa's public school students. Over half (53.8%) of Iowa's public school students are enrolled in one-eighth (55) of Iowa's schools.

None of the 49 schools with under 300 students increased enrollments, and only one of 118 schools with under 400 students increased from 1969 to 1977. The 159 schools with under 500 enrollment suffered the greatest loss in enrollment from 1969 to 1977, with only six of the 159 gaining students. Of the 67 schools gaining students from 1969 to 1977, 58 were in the 500-5,000 range. In September 1977, they enrolled 54.0% of

Iowa's 587,113 students. The largest increases were in the 3,000-5,000 enrollment group, with six of nine schools gaining students from 1969 to 1976. Their 8.0% gain was the only gain in any enrollment category.

The increases in the 3,000-5,000 enrollment category contrast with the 14.0% loss for the seven schools with over 10,000 students enrolled. Only one school in the over-10,000 category, Dubuque, increased.

Enrollment Trends by Area Education Agencies

Figure 5.3 provides enrollment comparisons for the fifteen AEAs. Their boundaries are irregular, using school district combinations rather than county lines. Both area and enrollments in the 15 AEAs show considerable variance. AEA 5, surrounding Fort Dodge, is the largest area, but ranks eighth in enrollment. AEA 11, surrounding Des Moines, is large in area and enrollment. Following the industrializing pattern, AEA 9, which includes Davenport, Clinton, and Muscatine, lost only -2.7% in the eight years. AEAs with extreme enrollment declines are Marshalltown (-10.8%), Waterloo (-12.1%), Mason City (-17.8%), and Sheldon (-18.4%). The average decline in AEA enrollments was 11.03%.

Declines from 1977 to 1982 and 1987 follow the previously discussed patterns. AEA 5 leads the group with an anticipated 19.8% drop. The projected state total drop to 1982 is 13.4%.

Significance of Private School Enrollments

The seven largest school districts enroll 23.3% of public school students, but within these districts are 41.2% of private school enrollments. When Area Education Agencies are analyzed, the largest number of private school students appears in northeastern Iowa (AEA 1—21.11%), followed by central Iowa (AEA 11—18.01%), Waterloo (AEA 7—8.24%), Davenport (AEA 9—8.48%), Cedar Rapids and Iowa City (AEA 10—9.69%), and Sioux City (AEA 12—8.52%). These five areas have 62.92% of public school enrollments, but 74.05% of private school enrollments. The AEAs stretching across southern Iowa from Council Bluffs to Henry and Lee counties (¼ of Iowa counties) have 17.94% of Iowa public school enrollment but only 4.55% of all private enrollments.

Iowa has several concentrations of parochial schools. AEA 1, in northeastern Iowa, enrolls 21.11% of Iowa's 57,700 private students. It has 21.31% of its students in private schools. Dubuque County leads Iowa with 9,759 private students, 36.6% of the county's enrollment and 16.9% of the state total. Northwestern Iowa has a concentration of Dutch Reform schools. Sioux County has 30.2% of its total enrollment in private schools, while Plymouth County has 20.0% (1,221). Carroll County has a large

Catholic enrollment, 45.8% of total students. Pella, in Marion County, has a concentration of Dutch, with 27.0% of students attending private schools. The state total is 9.85%.

Clearly, urban counties have the bulk of private students. Private school enrollment grew phenomenally from 1951 to 1965, then plummeted until 1972. The drop has been little greater than public school drops since 1972. Table 5.1 illustrates this historical data and projects figures to 2003.

Figure 5.1—Enrollment Trends and Projections

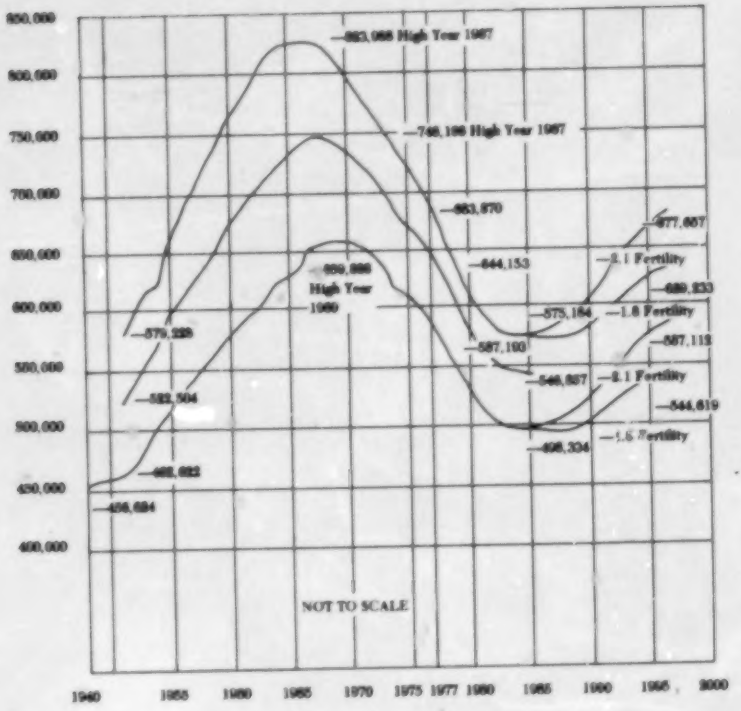


Table 5.2—Enrollments and Projections for Iowa Public Schools, 1977-78, 1982-83, and 1987-88

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
01	Bridgewater-Fontanelle	506	428	345	314
	Greenfield	865	728	604	564
	Orient-Macksburg	523	401	316	281
02	Corning	1,066	852	706	663
	Prescott	255	214	192	193
03	Allamakee Community	2,227	2,188	1,920	1,898
	East Allamakee	957	844	713	678
	Postville	1,147	845	639	544
04	Centerville	2,209	2,214	2,161	2,375
	Moravia	588	434	326	276
	Moulton-Udell	507	393	314	282
05	Audubon	1,652	1,256	991	880
	Exira	719	512	420	388
06	Belle Plaine	1,016	857	727	695
	Benton Community	1,688	1,594	1,437	1,460
	Norway	476	441	398	405
	Shellsburg	368	481	579	784
	Urbana	371	342	318	334
	Vinton	1,931	1,689	1,416	1,338
07	Cedar Falls	6,365	6,002	5,162	5,000
	Dunkerton	761	753	730	797
	Hudson	685	1,003	1,230	1,700
	LaPorte City	1,035	982	915	961
	Waterloo	19,667	15,221	12,082	10,732
08	Boone	2,958	26,000	2,160	2,021
	Grand Community	326	255	198	173
	Madrid	818	652	511	452
	Ogden	836	842	804	865
	United Community	554	399	295	246
09	Denver	854	998	1,032	1,202
	Janesville	570	629	625	696
	Plainfield	515	400	331	309
	Sumner	1,159	1,050	927	922
	Tripoli	823	754	665	660
	Wapsie Valley	1,101	1,026	874	839
	Waverly Shell Rock	2,553	2,380	2,186	2,262
10	East Buchanan	964	807	642	575
	Independence	2,212	2,071	1,787	1,697
	Jesup	1,163	1,214	1,096	1,114
11	Albert City-Truesdale	610	459	367	331

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
11	Alta	809	709	602	576
	Newell-Providence	517	395	324	307
	Rembrand	200	121	83	65
	Sioux Rapids	332	289	256	250
	Storm Lake	2,139	1,715	1,357	1,209
12	Allison Bristow	653	540	428	383
	Aplington	612	513	407	364
	Clarksville	607	571	543	587
	Dumont	359	279	215	187
	Greene	730	582	465	419
	New Hartford	428	458	444	485
	Parkersburg	663	625	558	562
13	Cedar Valley	421	349	293	277
	Lake City	859	666	545	503
	Lohrville	374	246	176	142
	Lytton	306	252	199	177
	Manson	982	766	600	546
	Pomeroy	414	375	334	335
	Rockwell City	923	701	518	431
14	Carroll	1,303	1,342	1,190	1,189
	Coon Rapids	675	601	572	613
	Glidden-Ralston	558	502	449	453
	Manning	885	705	553	489
15	Anita	629	520	414	371
	Atlantic	2,475	2,110	1,787	1,706
	Cumberland-Massena	506	416	370	371
	Griswold	1,193	994	795	716
16	Bennett	486	443	402	411
	Clarence-Lowden	675	584	496	475
	Durant	924	834	687	638
	Lincoln Community	765	648	528	484
	Tipton	1,343	1,099	887	806
	West Branch	1,008	896	799	802
17	Clear Lake	2,041	1,723	1,436	1,387
	Mason City	7,608	5,688	4,449	3,920
	Maservey-Thornton	404	262	184	145
	Rockwell-Swaledale	573	561	513	528
	Ventura	506	410	338	315
18	Aurelia	731	511	367	297
	Cherokee	2,028	1,765	1,460	1,361
	Marcus	516	633	466	386
	Meriden-Cleghorn	483	339	247	203
	Willow Community	460	384	306	278

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
19	Fredericksburg	343	499	450	457
	Nashua	1,065	939	867	902
	New Hampton	2,166	1,952	1,683	1,634
20	Clarke Community	1,485	1,406	1,281	1,315
	Murray	355	339	324	349
21	Clay Central	543	393	284	231
	Everly	548	390	294	249
	Sioux Valley	514	294	196	135
	South Clay	440	361	304	289
	Spencer	2,677	2,467	2,294	2,403
22	Central Clayton	1,178	979	847	826
	Garnavillo	614	452	329	270
	Guttenburg	819	894	867	947
	Mar-Mac	514	464	405	398
	M-F-L	1,070	787	586	491
	Starmont	1,396	1,189	1,020	986
23	Calamus	332	354	326	339
	Camanche	1,378	1,527	1,464	1,580
	Central Clinton	2,098	2,128	2,052	2,229
	Clinton Community	7,501	6,191	5,038	4,617
	Delwood	507	470	391	366
	Lost Nation	343	306	261	251
	Northeast Clinton	1,141	1,069	940	914
	Wheatland	443	415	375	381
24	Ar-We-Va	704	460	331	268
	Charter Oak-Ute	715	557	484	474
	Denison	2,074	1,945	1,789	1,854
	Dow City-Arion	449	374	304	279
	Manila	594	482	364	309
	Schleswig	600	480	382	343
25	Adel-De Soto	1,092	1,142	1,096	1,184
	Central Dallas	393	331	264	238
	Dallas Community	773	891	975	1,201
	Dexfield	618	645	639	711
	Perry	2,335	1,611	1,428	1,383
	Van Meter	381	415	432	506
	Waukee	822	954	922	1,004
	Woodward Granger	796	750	690	733
26	Davis County	2,003	1,723	1,514	1,494
27	Central Decatur	968	788	645	594
	Lamoni	456	463	449	490
	Mormon Trail	615	546	475	465
28	Edgewood-Colesburg	864	813	713	704

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
28	Maquoketa Valley	1,367	1,159	961	866
	West Delaware	2,443	2,266	1,911	1,816
29	Burlington	7,973	7,034	6,246	6,246
	Danville	586	620	650	767
	Mediapolis	1,350	1,138	970	931
	West Burlington	738	613	471	406
30	Arnolds Park	336	320	299	316
	Harris-Lake Park	549	432	350	320
	Milford	684	666	668	734
	Spirit Lake	1,341	1,353	1,294	1,395
30	Terril	449	348	280	278
31	Dubuque	11,635	12,648	12,181	13,213
	West Dubuque	2,545	3,386	3,086	3,188
32	Armstrong	524	528	531	601
	Estherville	2,381	2,020	1,612	1,449
	Lincoln Central	383	290	249	241
	Ringsted	347	218	151	118
33	Fayette	513	374	296	287
	North Fayette	1,551	1,394	1,206	1,175
	Oelwein	2,522	2,281	1,984	1,828
	Turkey Valley	1,221	1,064	903	847
	Valley-Elgin	872	702	582	489
	West Central	660	587	584	527
34	Charles City	3,225	2,896	2,467	2,368
	Nora Springs	752	670	622	650
	Rudd-Rockdale-Marble	1.041	928	832	840
35	CAL	437	322	238	198
	Hampton	1,562	1,361	1,206	1,206
	Sheffield-Chapin	643	506	432	413
36	Farragut	539	464	389	367
	Fremont	653	515	393	338
	Hamburg	556	516	446	472
	Sidney	559	504	471	496
37	East Greene	606	510	412	375
	Jefferson	1,540	1,389	1,251	1,229
	Paton-Churdan	534	380	298	346
	Scranton	426	322	255	228
38	Beamon-Conrad-Liscomb	757	588	385	451
	Dike	696	706	674	722
	Grundy Center	1,040	866	735	702
	Reinbeck	774	701	629	635
	Wellsburg	378	326	286	344

County	School District	Actual Enrollment Sept. 1980	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
39	Adair-Casey	698	556	484	436
	Bayard	317	266	226	216
	Guthrie Center	888	706	550	483
	Panora-Linden	531	555	507	502
	Stuart-Menlo	943	755	618	569
	Yale-Jamaica-Bagley	471	395	322	303
40	Northeast Hamilton	647	440	327	273
	South Hamilton	1,196	901	664	585
	Stratford	448	328	229	180
	Webster City	2,797	2,325	1,991	1,920
41	Britt	957	748	595	533
	Corwith-Wesley	429	352	281	253
	Garner-Hayfield	1,037	979	906	951
	Kanawha	343	279	237	227
	Clemme	346	269	195	154
	Woden-Crystal Lake	360	278	217	193
42	Ackley-Geneva	885	787	683	667
	Alden	558	470	412	406
	Eldora	907	857	734	709
	Hubbard	451	331	250	212
	Iowa Falls	2,063	1,755	1,485	1,415
	New Providence	250	168	134	103
	Radcliffe	467	393	347	345
	Steamboat Rock	229	170	144	137
	Union Whitten	423	316	286	252
43	Dunlap	717	541	434	392
	Logan-Magnolia	760	714	625	616
	Missouri Valley	1,279	1,294	1,153	1,166
	West Harrison	663	662	603	618
	Woodbine	773	683	580	555
44	Mount Pleasant	2,372	2,245	2,068	2,143
	New London	867	714	691	753
	Waco	815	662	541	498
	Winfield-Mt. Union	560	422	353	333
45	Howard-Winneshiek	2,434	2,155	1,923	1,933
	Riceville	1,014	821	676	686
46	Boone Valley	372	257	177	137
	Gilmore City-Bradgate	490	381	284	206
	Humboldt	2,000	1,594	1,278	1,154
	Twin Rivers	491	408	339	318
47	Battle Creek	365	322	282	279
	Galva	267	199	143	115
	Holstein	659	454	361	303

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
47	Ida Grove	880	745	626	592
48	Amana Community	400	330	254	227
	Deep River-Millersburg	355	296	230	206
	English Valleys	810	567	460	383
	H-L-V	703	566	459	430
	Iowa Valley	854	807	736	736
	Williamsburg	1,230	1,065	909	855
49	Andrew	451	482	458	490
	Bellevue	710	949	1,015	1,223
	East Central	873	696	560	506
	Maquoketa	2,087	2,076	1,911	1,992
	Preston	580	639	648	740
50	Baxter	446	401	396	337
	Colfax	866	748	588	580
	Lynnville-Sully	708	635	543	523
	Mingo	334	305	295	321
	New Monroe	747	771	745	811
	Newton	5,251	4,347	3,637	3,488
	Prairie City	538	450	389	333
51	Fairfield	3,155	2,835	2,449	2,381
52	Clear Creek	886	596	859	928
	Iowa City	9,061	8,873	8,117	8,364
	Lone Tree	551	490	486	486
	Solon	832	935	904	984
53	Anamosa	1,948	1,680	1,434	1,378
	Midland	707	581	466	425
	Monticello	1,625	1,408	1,183	1,119
	Olin	439	415	354	341
	Oxford Junction	319	252	206	194
54	Hedrick	339	306	269	266
	Keota	660	449	321	259
	Pekin	870	732	617	586
	Sigourney	1,184	965	773	697
	Tri-County	675	491	381	333
55	Algona	1,191	1,726	1,453	1,378
	Burt	271	260	226	222
	Lakota	271	176	130	108
	Ledyard	268	181	137	116
	Luverne	260	230	203	201
	Sentral	508	377	290	268
	Swea City	560	364	280	209
	Titonka	521	356	249	194
56	Central Lee	1,035	1,340	1,358	1,541

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
56	Fort Madison	3,935	3,436	2,880	2,738
	Keokuk	3,739	2,986	2,396	2,166
57	Alburnett	735	750	712	761
	Cedar Rapids	25,014	21,952	18,472	17,507
	Center Point	652	743	795	958
	Central City	876	810	732	745
	College Community	2,582	2,829	2,586	2,671
	Linn-Mar	2,723	3,366	3,537	4,186
	Lisbon	551	557	567	650
	Marion	2,966	2,431	1,912	1,694
	Mount Vernon	1,048	1,045	978	1,031
	North Linn	1,096	1,027	904	936
	Springville	722	707	619	611
58	Columbus Community	974	956	864	860
	Louisa-Muscatine	914	1,116	1,158	1,350
	Morning Sun	376	266	206	182
	Wapello	990	965	886	920
59	Charlton	2,034	1,784	1,572	1,560
	Russell	322	265	205	178
60	Central Lyon	1,218	984	806	743
	George	646	550	461	436
	Little Rock	345	278	223	202
	West Lyon	1,186	1 088	1,004	1,004
61	Earlham	576	579	556	601
	Interstate 35	952	926	852	884
	Winterset	1,662	1,612	1,474	1,519
62	Fremont	247	212	175	163
	North Mahaska	678	621	553	554
	Oskaloosa	3,066	2,677	2,312	2,248
63	Knoxville	2,235	2,302	2,171	2,305
	Melcher-Dallas	609	570	526	547
	Pella	1,587	1,579	1,517	1,641
	Pleasantville	714	766	767	862
	Twin Cedars	725	699	622	624
64	Green Mountain	282	253	235	246
	L-D-F	645	623	589	628
	Marshalltown	6,450	6,461	5,728	5,719
	Semco	526	470	398	380
	West Marshall	1,356	1,160	983	938
65	Glenwood	1,548	1,749	1,987	2,245
	Malvern	460	443	420	449
	Nishna Valley	511	450	417	136
66	Osage	1,959	1,511	1,205	1,082

Table 5.1—Iowa Births and School Enrollments—Public and Private

School Year	Births		Potential Enrollment 13 Years	Survival Ratio	Public and Private Enrollment	Private Enrollment	Public Enrollment	Change Public
	Spring Grads.	Fall Kindg.						
1960-1	47,030	63,459	755,233	.890	671,865	94,130	577,735	+10,482
1965-6	61,252	64,154	821,364	.888	729,521	104,175	625,346	+ 4,921
1967-8	61,364	61,708	823,988	.906	746,166	93,027	653,139	+15,073
1969-70	65,076	56,145	811,504	.911	738,919	79,031	659,886	+ 1,952
1970-1	64,686	52,281	799,099	.914	730,693	71,117	659,576	- 312
1975-6	63,413	48,063	721,998	.929	670,827	59,999	610,828	- 6,252
1977-8	63,799	42,123	683,870	.942	644,153	57,040	587,113	-16,483
	IOWA BIRTHS AND SCHOOL ENROLLMENTS—PUBLIC AND PRIVATE USING A 2.1 FERTILITY RATE							
1980-1	61,708	41,013	614,702	.950	583,967	51,389	532,578	-17,238
1984-5	49,323	45,688	575,184	.950	546,424	48,485	498,339	- 3,150
1985-6	47,634	48,089	575,639	.950	546,857	48,123	498,735	+ 395
1990-1	41,123	52,882	602,511	.950	572,385	50,370	522,015	+ 9,321
1995-6	44,421	53,117	663,601	.950	630,421	55,477	574,944	+ 7,534
1997-8	45,688	52,137	677,657	.950	643,774	56,652	587,122	+ 5,744
	IOWA BIRTHS AND SCHOOL ENROLLMENTS—PUBLIC AND PRIVATE ENROLLMENT PROJECTIONS ASSUMING A 1.8 FERTILITY RATE							
1985-6	47,634	50,148	573,240	.950	554,578	48,467	496,111	- 1,289
1987-8	47,634	46,061	572,478	.950	543,854	48,403	495,451	- 471
1990-1	42,123	48,349	579,953	.950	550,955	49,035	501,920	+ 5,366
1995-6	44,421	49,727	680,465	.950	589,442	52,460	536,982	+ 4,593
2000-1	47,091	49,748	638,634	.950	606,693	53,996	552,697	+ 2,708
2002-3	42,987	49,392	642,183	.950	610,074	54,274	555,810	+ 1,291

SOURCE: Department of Public Instruction, *Data on Iowa Schools*

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
66	St. Ansgar	1,181	920	731	655
67	East Monona	402	287	237	221
	Maple Valley	1,061	982	817	766
	West Monona	1,187	969	808	759
	Whiting	341	185	245	237
68	Albia	2,004	1,733	1,415	1,301
69	Red Oak	1,869	1,667	1,500	1,521
	Stanton	347	341	315	327
	Villisca	732	543	428	381
70	Muscatine	6,574	6,395	5,905	6,142
	West Liberty	1,361	1,181	1,024	999
	Wilton	887	964	935	1,022
71	Hartley	751	585	459	406
	Paullina	632	437	330	281
	Primghar	431	302	256	245
	Sanborn	446	345	266	230
	Sheldon	1,554	1,317	1,065	970
	Sutherland	569	488	434	435
72	Melvin	313	156	102	76
	Ocheyedan	317	232	184	164
	Sibley	1,215	916	720	638
73	Clarinda	1,394	1,220	1,143	1,207
	Essex	409	361	326	331
	Shenandoah	1,629	1,496	1,327	1,325
	South Page	603	473	401	383
74	Ayrshire	304	238	176	146
	Emmetsburg	1,429	1,231	1,057	1,023
	Graettinger	574	458	359	317
	Mallard	367	270	200	167
	Ruthven	374	268	315	416
	West Bend	477	392	340	331
75	Akron	751	608	523	506
	Hinton	670	594	557	588
	Kingsley-Pierson	727	653	541	505
	Le Mars	2,814	2,279	1,160	1,698
	Remsen-Union	523	514	455	453
	Westfield	334	301	256	246
76	Fonda	282	259	206	184
	Havelock-Clover	271	239	203	193
	Laurens-Marathon	1,049	722	530	438
	Palmer	229	195	159	146
	Pocahantas	715	687	560	514
	Rolfe	423	347	295	282

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
77	Ankeny	3,228	4,279	4,595	5,557
	Bondurant-Farrar	520	805	937	1,229
	Des Moines	45,533	37,098	30,363	27,990
	Johnston	1,175	1,265	1,212	1,307
	North Polk	828	815	812	912
	Saydel	2,639	1,913	1,469	1,270
	Southeast Polk	3,195	3,498	3,480	3,900
	Urbandale	3,472	3,306	2,788	2,647
	West Des Moines	6,084	6,630	6,350	6,851
78	Avoca	671	620	599	651
	Carson-Macedonia	576	427	344	313
	Council Bluffs	15,560	12,406	9,866	8,838
	Lewis Central	2,642	2,949	2,851	3,104
	Oakland	673	580	467	423
	Treynor	500	524	505	548
	Tri Center	1,003	917	853	893
	Underwood	726	796	808	924
	Walnut	366	310	247	221
79	Brooklyn-Guernsey-Malcom	1,007	826	680	629
	Grinnell-Newburg	2,671	2,243	1,850	1,718
	Montezuma	680	691	666	724
80	Diagonal	240	185	143	124
	Grand Valley	331	297	273	283
	Mount Ayr	1,023	799	652	600
81	Crestland	416	318	284	186
	Lakeview-Auburn	647	566	461	422
	Odebolt-Arthur	794	598	467	410
	Sac Community	1,168	856	664	581
	Schaller	431	337	253	215
	Wall Lake	461	347	265	229
82	Bettendorf	5,727	5,456	4,869	4,894
	Davenport	23,658	22,197	19,891	20,076
	North Scott	2,632	3,545	4,307	5,893
	Pleasant Valley	2,283	2,715	2,859	3,391
83	Elk Horn-Kimballton	462	411	331	300
	Harlan	2,428	2,122	1,822	1,761
	Irwin	471	387	303	268
	Shelby	390	377	326	318
84	Boyden-Hull	767	624	535	516
	Floyd Valley	569	454	376	351
	Maurice-Orange City	861	788	677	655
	Rock Valley	721	678	625	649

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
84	Sioux Central	1,005	951	874	905
	West Sioux	1,311	1,032	841	771
85	Ames	6,182	5,555	4,922	4,912
	Ballard	1,117	1,245	1,305	1,540
	Collins	271	176	115	84
	Colo	349	336	305	311
	Gilbert	524	632	650	753
	Maxwell	406	352	323	333
	NESCO	540	397	337	323
	Nevada	1,617	1,509	1,333	1,327
	Roland Story	1,056	963	847	838
86	Dysart-Geneseo	835	676	575	551
	Garwin	330	310	284	292
	Gladbrook	502	408	339	317
	North Tama	941	835	764	788
	South Tama	2,674	2,276	1,921	1,827
87	Bedford	972	831	699	662
	Clearfield	233	133	81	56
	Lenox	588	477	395	369
	New Market	324	297	263	262
88	Creston	2,411	2,088	1,863	1,872
	East Union	860	791	710	719
89	Fox Valley	307	272	223	206
	Harmony	713	611	491	444
	Van Buren	1,085	949	804	766
90	Blakesburg	353	328	304	318
	Cardinal	1,223	1,123	996	995
	Eddyville	956	818	721	716
	Ottumwa	8,096	6,456	5,100	4,538
91	Carlisle	1,314	1,463	1,479	1,685
	Indianola	2,873	3,090	3,072	3,439
	Martinsdale St. Marys	537	593	591	664
	Norwalk	1,033	1,664	2,001	2,710
	Southeast Warren	810	800	716	722
92	Highland	840	810	775	834
	Mid-Prairie	1,649	1,365	1,143	1,087
	Washington	2,347	1,963	1,664	1,590
93	A-C-L	187	156	144	149
	Seymour	600	510	434	417
	Wayne Community	958	786	678	659
94	Central Webster	578	406	310	265
	Dayton	368	350	336	364

County	School District	Actual Enrollment Sept. 1969	Actual Enrollment 1977-78	Projected Enrollment 1982-83	Projected Enrollment 1987-88
94	Fort Dodge	7,920	6,389	5,225	4,813
	Northwest Webster	414	394	377	407
	Prairie	1,196	866	635	524
95	Buffalo Center	638	444	3[illegible]	28[illegible]
	Forest City	1,541	1,555	1,409	1,438
	Lake Mills	1,148	935	755	687
	Rake	190	159	123	117
	Thompson	460	313	268	259
96	Decorah	2,047	1,864	1,629	1,603
	North Winneshiek	608	514	428	402
	South Winneshiek	1,003	843	727	706
97	Anthon-Oto	602	472	395	372
	Eastwood	672	491	393	354
	Lawton-Bronson	788	738	659	663
	Sergeant Bluff-Luton	859	871	887	1,017
	Sioux City	18,886	15,964	13,816	13,493
	Westwood	1,045	764	602	534
	Woodbury-Central	790	603	482	434
98	North Central	894	772	662	639
	Northwood-Kensett	928	860	734	705
99	Belmond	1,157	927	804	785
	Clarion	1,229	900	659	544
	Dows	427	334	287	278
	Eagle Grove	1,774	1,416	1,119	996
	Goldfield	304	225	159	126

Table 5.3—Enrollment Trends by Geographical Areas

Rural Counties	High Enrollment	1977 Enrollment	1982 Projected Enrollment	Change High—1977	Change 1977-1982	High 1982	% of State Total		
							High	1977	1982
16 NE	73,832	62,971	54,125	−14.7	−14.0	−26.7	10.8	10.7	10.6
21 NW	87,336	68,393	56,269	−21.7	−17.7	−35.6	12.8	11.7	11.0
8 W Central	29,939	24,745	20,923	−17.3	−15.4	−30.1	4.4	4.2	4.1
18 South	48,811	38,680	33,832	−20.8	−12.5	−30.7	7.2	6.6	6.6
63 Most Rural	239,918	194,789	165,149	−18.8	−15.2	−31.2	35.2	33.2	32.4
6 Central Suburban	34,579	31,698	29,671	− 8.3	− 6.4	−14.2	5.1	5.4	5.8
12 Nonurban	55,317	48,232	41,960	−12.8	−13.0	−24.1	8.1	8.2	8.2
81 Total Rural	329,814	274,719	236,780	−16.7	−13.8	−17.2	48.3	46.8	46.5
18 Urban	352,474	312,190	272,785	−11.4	−12.6	−22.6	51.7	53.2	53.5
Total Iowa	682,288*	586,909**	509,565**						
Actual	659,888	587,113	507,550	−11.0	−13.6	−23.1	100.0	100.0	100.0

*This is larger than the actual enrollment. It covers different years—the year when each county had its largest enrollment.
**The difference from the actual results from error in individual school computations. These totals are necessary to get correct percentages.
SOURCE: Truesdell, Computer Runs of Individual Schools from DPI Annual Reports on Enrollment

Table 5.4—Iowa Cities with over 10,000 Population in 1940: Enrollment Trends

District	September Head Count				Percent of Change		Projected Enrollment		
	High Year	Enrolled	1969	1977	77/High	77/69	1982	1987	87/High
Enrollment over 10,000									
Des Moines	1967	47,181	45,533	37,098	−21.4	−18.5	30,363	27,990	−40.7
Davenport	1968	23,690	23,658	22,197	− 6.3	− 6.2	19,891	20,076	−15.3
Cedar Rapids	1967	26,048	25,014	21,952	−15.7	−12.2	18,472	17,507	−32.8
Sioux City	1968	18,890	18,886	15,934	−15.6	−15.6	13,816	13,493	−28.6
Waterloo	1967	19,938	19,667	15,934	−23.2	−22.1	12,082	10,732	−46.2
Council Bluffs	1968	15,621	15,560	12,406	−20.6	−20.3	9,866	8,838	−43.4
TOTAL		151,368	148,318	124,908	−17.5	−15.8	104,490	98,636	−34.8
IOWA TOTAL	1969	659,888	659,888	587,113	−11.0	−11.0	506,990	503,272	−23.7
Percent of Iowa Total		22.9%	22.5%	21.1%			20.6%	19.6%	
Dubuque	1976	13,678	11,631	12,648	− 7.5	+ 8.7	12,181	13,213	− 3.4
TOTAL OVER 10,000		165,046	149,949	137,556	−16.7	−14.0	116,671	111,849	−32.2
Enrollment 5,000 to 10,000									
Iowa City	1970	9,576	9,061	8,373	− 7.3	− 1.7	8,117	8,364	−12.6
Burlington	1967	7,985	7,973	7,034	−11.9	−11.8	6,246	6,246	−11.8
West Des Moines	1975	6,705	6,084	6,630	− 1.1	+ 9.0	6,350	6,851	+ 2.2
Marshalltown	1971	6,988	6,450	6,461	− 7.5	+ 0.2	5,728	5,719	−18.2

Table 5.4 (CONTINUED)

District	September Head Count				Percent of Change		Projected Enrollment		
	High Year	Enrolled	1969	1977	77/High	77/69	1982	1987	87/High
Enrollment 5,000 to 10,000									
Ottumwa	1967	8,322	8,096	6,456	−22.4	−20.3	5,100	4,538	−45.5
Muscatine	1971	6,590	6,574	6,395	− 3.0	− 2.7	5,905	6,142	− 6.8
Fort Dodge	1968	8,075	7,920	6,389	−20.9	−19.3	5,225	4,813	−40.4
Clinton	1970	7,510	7,501	6,191	−17.6	−17.5	5,038	4,617	−38.5
Cedar Falls	1966	6,995	6,365	6,002	−14.2	− 5.7	5,162	5,000	−28.5
Mason City	1968	7,753	7,608	5,688	−26.6	−25.2	4,449	3,920	−49.4
Ames	1969	6,182	6,182	5,555	−10.1	−10.1	4,922	4,912	−20.5
Bettendorf	1972	5,810	5,727	5,456	− 6.1	− 4.7	4,869	4,894	−15.8
TOTAL 5,000-10,000		88,491	85,541	77,130	−12.8	− 9.8	67,111	66,016	−25.4
Percent of Iowa Total		13.4%	13.0%	13.1%			13.2%		
Enrollment below 5,000									
Newton	1968	5,317	5,251	4,347	−18.2	−17.2	3,637	3,426	−35.6
Fort Madison	1968	3,996	3,935	3,436	−14.0	−12.7	2,890	2,738	−31.5
Keokuk	1968	3,769	3,739	2,986	−20.8	−20.1	2,396	2,166	−42.5
TOTAL OVER 3,000	1976	266,619	258,415	225,453	−15.4	−12.8	192,705	186,195	−30.2
Percent of Iowa Total		40.4%	39.2%	38.3%			38.0%	37.0%	

Table 5.4 (CONTINUED)

School Districts Which Have Enrolled More Than 3,000 Any Time since 1967									
		September Head Count			Percent of Change		Projected Enrollment		
District	High Year	Enrolled	1969	1977	77/High	77/69	1982	1987	87/High
Cities Enrolling over 3,000 since 1966									
Charles City	1970	3,272	3,228	2,806	−11.5	−10.3	2,467	2,368	−17.6
Fairfield	1967	3,281	3,155	2,835	−13.6	−10.1	2,448	2,381	−17.4
Boone	1967	3,600	2,958	2,600	−27.2	−12.1	2,160	2,021	−43.9
Oskaloosa	1968	3,126	3,065	2,677	−14.4	−12.7	2,312	2,248	−28.2
Marion	1971	3,048	2,800	2,431	−20.2	−16.1	1,912	1,694	−44.4
Growing Suburban Districts									
Ankeny (DM)	1977	4,279	3,228	4,279	00.0	+32.6	4,595	5,557	+29.9
Southeast Polk	1977	3,498	3,195	3,498	00.0	+ 9.5	3,480	3,900	+11.5
North Scott	1977	3,545	2,632	3,545	00.0	+34.7	4,307	5,893	+66.2
Western Dubuque	1977	3,582	2,545	3,386	− 5.5	+33.0	3,066	3,128	−12.7
Linn Mar	1977	3,366	2,723	3,366	00.0	+23.6	3,537	3,186	− 5.3
Urbandale	1972	3,726	3,472	3,306	−11.3	− 4.8	2,788	2,647	−29.0
Indianola	1977	3,090	2,873	3,090	00.0	+ 7.6	3,072	3,439	+11.3
Total over 3,000 in 1977				246,139					
Percent of Iowa Total				41.9%					

Table 5.5—Enrollment Trends in Relation to Distance from a City of over 10,000

Central City	# of School Districts				Enrollment			Projected		
	Total	Increase	Decrease	Decrease Over 11.0%	Sept. 1969	Sept. 1977	Percent Change	Enrollment Sept. 1987	1987 / 1977	1987 / 1969
Fort Dodge	1	0	1	1	7,920	6,389	−19.3	4,813	−24.7	−39.2
Adjacent Districts	6	0	6	5	8,759	7,003	−20.0	5,266	−24.8	−39.9
1 District Removed	11	0	11	10	6,748	5,305	−24.3	3,556	−33.0	−47.3
Farther Away	6	0	6	6	5,344	4,377	−18.0	3,159	−27.8	−40.9
TOTAL	24	0	24	22	28,771	23,074	−19.8	16,794	−27.2	−41.6
Mason City	1	0	1	1	7,606	5,688	−25.2	3,920	−31.1	−48.5
Adjacent Districts	4	0	4	2	4,280	3,720	−12.5	3,204	−14.0	−24.8
1 District Removed	11	0	11	7	13,309	11,376	−14.5	9,053	−20.4	−32.0
Farther Away	4	0	4	3	3,384	2,902	−14.2	2,411	−16.9	−28.8
TOTAL	20	0	20	13	28,561	23,692	−17.0	18,588	−21.5	−34.9
Sioux City	1	0	1	1	18,886	15,934	−15.6	13,493	−15.3	−28.5
Adjacent Districts	4	1	3	1	2,851	2,504	− 5.5	2,914	+16.4	+ 9.9
1 District Removed	6	0	6	4	6,65[illegible]	5,421	−18.5	4,130	−23.8	−37.9
Farther Away	3	0	3	3	1,o15	1,248	−22.7	963	−22.8	−40.4
TOTAL	14	1	12	9	29,802	25,107	−15.8	21,500	−14.4	−27.9

Table 5.5 (CONTINUED)

Central City	# of School Districts				Enrollment					
	Total	Increase	Decrease	Decrease Over 11.0%	Sept. 1969	Sept. 1977	Percent Change	Projected Enrollment Sept. 1987	1987/1977	1987/1969
Ottumwa	1	0	1	1	8,096	6,456	−20.3	4,538	−29.7	−43.9
Adjacent Districts	7	0	7	4	5,991	5,247	−12.4	4,538	−13.5	−24.3
1 District Removed	7	0	7	6	11,557	9,966	−13.6	7,951	−20.4	−31.2
TOTAL	15	0	15	11	25,644	21,669	−15.4	17,027	−20.5	−33.6
Waterloo	1	0	1	1	19,667	15,321	−22.1	10,732	−30.0	−45.4
Cedar Falls	1	0	1	0	6,365	6,002	− 5.7	5,000	−16.3	−21.6
Adjacent Districts	8	6	2	0	6,190	6,805	+ 9.9	7,679	+12.8	+24.1
1 District Away	11	0	11	4	12,857	11,640	− 9.5	10,032	−13.2	−22.0
Farther Away	9	0	9	6	7,995	7,002	−12.4	5,800	−19.2	−27.5
TOTAL	30	6	24	11	53,024	46,770	−11.9	39,243	−16.1	−26.1
Council Bluffs	1	0	1	1	15,560	12,406	−20.3	8,838	−28.8	−43.2
Adjacent Districts	5	4	1	0	6,150	6,470	+ 5.2	6,635	+ 2.6	+ 7.9
1 District Removed	10	1	9	4	6,905	6,537	− 5.3	6,069	+ 7.3	−12.2
TOTAL	16	5	11	5	28,615	25,413	−11.2	21,542	−15.2	−24.7

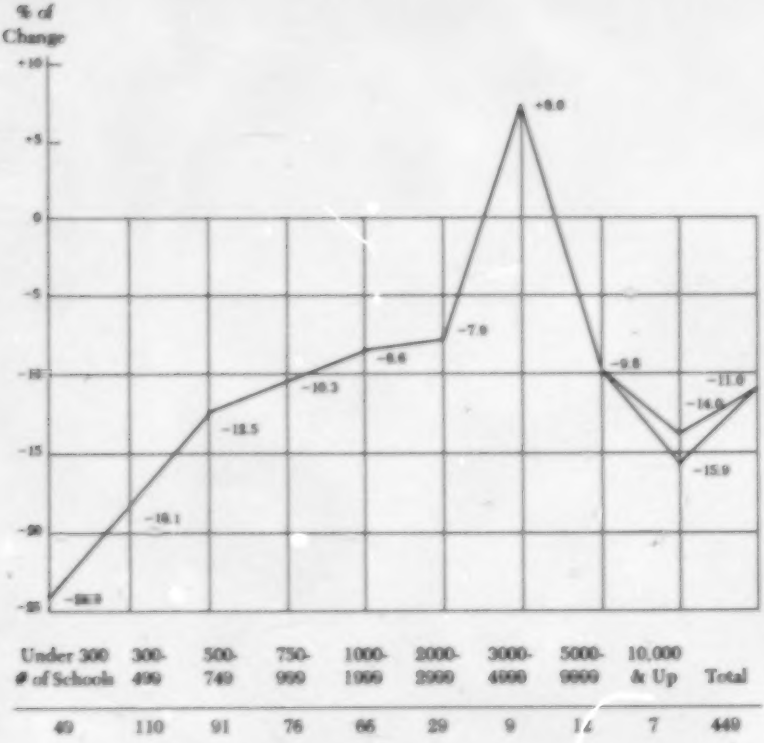
Table 5.5 (CONTINUED)

Central City	# of School Districts: Total	Increase	Decrease	Decrease Over 11.0%	Enrollment: Sept. 1969	Sept. 1977	Percent Change	Projected Enrollment Sept. 1987	1987/1977	1987/1969
Des Moines	1	0	1	1	45,533	37,068	−18.5	27,990	−24.6	−38.5
Metro Des Moines	3	0	3	2	51,327	42,317	−17.9	31,907	−24.6	−38.1
Adjacent Districts	7	7	0	0	18,389	21,030	+14.4	23,968	+14.0	+30.3
1 District Removed	10	5	5	1	6,906	7,585	+ 9.9	8,904	+17.2	+28.9
Farther Away	14	6	8	3	9,804	9,743	+ 0.6	9,866	+ 1.3	+ 0.6
TOTAL	34	18	16	6	86,628	80,685	− 6.9	74,645	− 7.5	−13.8
Muscatine	1	0	1	0	6,574	6,396	− 2.7	6,142	− 4.0	− 6.6
Adjacent Districts	4	2	2	1	4,086	4,097	+ 0.3	4,009	− 2.1	− 1.9
1 District Removed	6	0	6	2	5,352	4,839	− 9.6	4,245	−12.3	−20.7
Farther Away	1	0	1	1	376	266	−29.3	182	−31.6	−51.6
TOTAL	12	2	10	4	16,388	15,597	− 4.8	14,578	− 6.5	−11.0
Davenport	1	0	1	0	23,656	22,197	− 6.2	20,076	− 9.6	−15.1
Adjacent Districts	4	2	2	0	11,566	12,550	+ 8.5	14,816	+18.1	+28.1
1 District Removed	7	4	3	1	6,985	7,012	+ 0.4	6,961	− 0.7	− 0.3
TOTAL	12	6	6	1	42,209	41,759	− 1.1	41,853	+ 0.2	− 0.8

Table 5.5 (CONTINUED)

Central City	# of School Districts: Total	Increase	Decrease	Decrease Over 11.0%	Enrollment: Sept. 1960	Sept. 1977	Percent Change	Projected Enrollment Sept. 1987	1987/1977	1987/1969
Clinton	1	0	1	1	7,501	6,191	−17.5	4,617	−25.4	−38.4
Adjacent Districts	3	1	2	1	3,398	3,314	− 2.3	3,000	− 9.5	−11.6
1 District Removed	4	3	1	0	5,817	6,782	+16.6	9,228	+36.1	+58.6
Farther Away	5	4	1	0	5,863	6,576	+12.2	7,427	+12.9	+26.7
TOTAL	13	8	5	2	22,573	22,863	+ 1.3	24,272	+ 6.2	+ 7.5
Dubuque	1	1	0	0	11,631	12,648	+ 8.7	13,213	+ 4.5	+13.6
Adjacent Districts	6	4	2	1	7,319	8,366	+14.3	8,195	− 2.1	+12.0
1 District Removed	2	0	2	1	2,231	1,972	−11.5	1,602	+ 8.8	−18.2
TOTAL	9	5	4	2	21,181	22,986	+ 8.5	23,010	+ 0.1	+ 8.6
STATE TOTAL	449				659,888	567,123	−11.0	503,272	−14.3	−23.7
Central City	20	2	18	12	246,604	212,569	−13.8	174,450	−17.9	−29.3

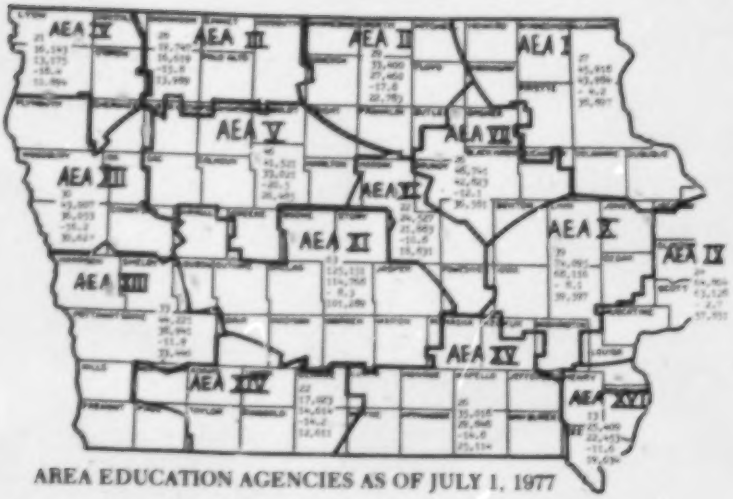
Figure 5.2—Enrollment Trends by School Enrollment Category September 1969 to September 1977



Under 300	300-	500-	750-	1000-	2000-	3000-	5000-	10,000	
# of Schools	499	749	999	1999	2999	4999	9999	& Up	Total
49	110	91	76	66	29	9	12	7	449

Figure 5.3—Enrollment by Area Education Agencies

1—# of Schools
2—September 1969 Enrollment
3—September 1977 Enrollment
4—Percent of Change
5—Projected September 1987 Enrollment



AREA EDUCATION AGENCIES AS OF JULY 1, 1977